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ABSTRACT

This publication includes reports of research on children in progress or recently completed from March 1975 through August 1975. Each entry includes information concerning the investigator, purpose, subjects, methods, duration, cooperating groups, and findings (if available). The reports are listed under several topical headings: (1) long-term research, (2) growth and development, (3) special groups of children, (4) the child in the family, (5) socioeconomic and cultural factors, (6) educational factors and services, (7) social services, and (8) health services. In addition to the reports on research, an extensive bibliography on children's self concept is included. (BRT)

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RESEARCH RELATING TO CHILDREN

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NOTES: *Research Relating to Children* is prepared by the ERIC Clearinghouse on Early Childhood Education under the direction of Lilian G. Katz, Ph.D. Investigators who wish to submit abstracts of their research projects should address correspondence to:

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PREFACE

Research Relating to Children, Bulletin 35 includes reports of research in progress or recently completed research. With the exception of the section on Long-Term Research, it does not repeat studies included in *Bulletins 3* through *34*, even though they are still in progress. This issue, therefore, does not reflect all research relating to children, but only research reported to us from March 1975 through August 1975.

In addition to reports of current research, *Bulletin 35* contains Children's Self-Concept: A Bibliography, which updates previous ERIC Clearinghouse on Early Childhood Education bibliographies on the subject. The bibliographic sources include ERIC documents, journal articles, books, and pamphlets that we hope you will find useful.

Publication references and plans are cited in the abstracts of research in the bulletin. The Clearinghouse, however, does not maintain information on the publications of the investigators. If you wish to obtain further details about any of the projects, please check professional journals in the appropriate field or write directly to the investigator.

We wish to thank investigators who have submitted reports of their research and those who have informed us of other studies. We wish to acknowledge the valuable assistance of the Science Information Exchange and other foundations that provided us with information about research grants.

Lilian G. Katz, Ph.D.
Director
ERIC Clearinghouse on Early Childhood Education

To Research Investigators:

This publication is only as complete as you are willing to make it. On page 183 you will find a form for reporting your current research. On page 187 you will find a form to let us know of other investigators who are working in the field. Please let us hear from you.

Research Relating to Children
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CHILDREN'S SELF-CONCEPT: A BIBLIOGRAPHY

This selective bibliography on the self-concept of children is divided into four sections: (1) Preschool Level, (2) Elementary School Level, (3) High School Level, and (4) General Studies and Articles on Self-Concept. Each section contains a list of books, ERIC documents (denoted by ED numbers), and journal articles.

Citations of ERIC documents appeared in *Research in Education (RIE)* from May 1974 through July 1975; citations of journal articles appeared in *Current Index to Journals in Education (CIJE)* from April 1974 through August 1975. Books cited may be obtained from publishers whose addresses are listed, and books and journal articles are available in public libraries. ERIC documents may be ordered from Computer Microfilm International Corporation (use order blank following bibliography). ERIC studies may be ordered on microfiche (MF) or on hard copy (HC). To read MF (a transparent film card), use a microfiche reader available in most libraries. HC is a photocopy of the original document.

Major descriptors (marked with asterisks) and minor descriptors appear under each citation. Descriptors with asterisks denote the document's major subject matter; terms without descriptors suggest topics of lesser import that are covered in the document. "Self-concept" and "self-esteem" were the index terms used to search *RIE* and *CIJE*.

Children's Self-Concept: A Bibliography updates *Self-Concept: An Abstract Bibliography* by Norman K. Howard (listed in the fourth section of the bibliography).

Preschool Level

Barber, Lucie W. Research design for exploring the development of self-regard in preschool children. March 1974, 14 pp. ED 103 101.

Home Programs, Instructional Materials, *Parent Education, *Preschool Children, *Rating Scales, *Research Design, Research Methodology, *Self Concept

Cornett, Joe D. *et al.* Effect of an intervention program on "high risk" Spanish American children. *Journal of Educational Research*, April 1974, 67(8), 342-343.

*Bilingual Education, *Disadvantaged Youth, Early Experience, Language Development, *Mental Development, Preschool Children, *Self Concept, *Spanish Americans, Spanish Speaking

Felker, Donald W. *Building positive self-concepts.* 1974, 135 pp. Available from Burgess Publishing Company, 7108 Ohms Lane, Minneapolis, Minnesota 55435 (paperback, $2.95 plus $0.50 postage).

*Adolescence, Behavior Patterns, *Developmental Psychology, Discipline, *Early Childhood, Goal Orientation, Interpersonal Relationship, Parent Attitudes, Reinforcement, *Self Concept, *Self Esteem, Social Development, Student Teacher Relationship, Teacher Behavior, Teaching Methods

Kyle, David *et al.* Case studies of children in Head Start Planned Variation, 1971-1972. 1973, 122 pp. ED 085 095 (1970-71 report: ED 069 354).

*Case Studies, *Classroom Observation Techniques, Cognitive Development, Concept Formation, *Preschool Children, *Self Concept, Social Development

Landry, Richard G. *et al.* Self-concept enhancement in a preschool program. *Journal of Experimental Education,* Summer 1974, 42(4), 39-43.

*Child Development, Data Analysis, Preschool Education, *Preschool Programs, *Research Methodology, *Self Concept, Tables (Data)

McAdoo, Harriette Pipes. A different view of race attitudes and self-concepts in black preschool children. August 1973, 16 pp. ED 102 035.

*Early Childhood, Identification (Psychological), *Negro Attitudes, Negro Stereotypes, Psychological Testing, Race Relations, *Racial Attitudes, *Self Concept, Self Concept Tests, Sex Role

Mood, Darlene and Johnson, James. Young children's understanding of the affective states of others: Empathy or cognitive awareness? July 1973, 24 pp. ED 092 216.

*Affective Behavior, Age Differences, Behavior Patterns, Cognitive Processes, *Empathy, Peer Relationship, *Preschool Children, *Self Concept, Self Concept Tests, Sex Differences, *Social Development

Rice, Audrey S. *et al.* Person perception, self-identity, and ethnic group preference in Anglo, Black, and Chicano preschool and third-grade children. *Journal of Cross-Cultural Psychology,* March 1974, 5(1), 100-108.

*Ethnic Groups, *Identification (Psychological), Mexican Americans, Middle Class Culture, Negroes, *Perception, Racial Differences, Research, *Self Concept, *Self Congruence

Rosen, Pamela. Self-concept measures. Head Start Test Collection. June 1973, 8 pp. ED 086 737.

*Annotated Bibliographies, Behavior Rating Scales, Elementary School Students, Kindergarten Children, Measurement Techniques, Preschool Children, Preschool Tests, School Attitudes, Self Concept, *Self Concept Tests, Self Evaluation, *Student School Relationship, *Tests

Samuels, Shirley C. An investigation into the self-concepts of lower- and middle-class black and white kindergarten children. *Journal of Negro Education*, February 1973, 42(4), 467-472.

Caucasians, *Family Influence, *Kindergarten Children, Negroes, *Racial Differences, *Self Concept, Social Differences, Socioeconomic Status, Suburban Youth

Stephens, Mark W. Parent behavior antecedents, cognitive correlates and multidimensionality of locus of control in young children. August 1973, 12 pp. ED 087 557.

Behavior Patterns, *Intellectual Development, *Locus of Control, Mothers, *Parent Child Relationship, Parent Education, *Preschool Children, *Self Concept

Taub, Marvin. Self-concepts of parents and children. *Home Economics Research Journal*, December 1974, 3(2), 142-145.

Correlation, Evaluation Methods, *Interpersonal Relationship, Measurement Techniques, *Parents, *Preschool Children, *Psychological Studies, *Self Concept

Thomas, Jerry R. *et al.* Effects of perceptual-motor training on preschool children: A multivariate approach. April 1974, 16 pp. ED 096 286.

*Academic Ability, Educational Programs, Kindergarten Children, *Motor Development, *Perceptual Development, *Perceptual Motor Learning, *Self Concept

Tocco, T. Salvatore and Bridges, Charles M., Jr. The relationship between the self-concepts of mothers and their children. *Child Study Journal*, 1973, 3(4), 161-179.

*Disadvantaged Groups, *Early Childhood, Factor Analysis, Grade 1, Kindergarten Children, *Mothers, *Parent Child Relationship, *Self Concept

Torshen, Kay Pomerance *et al.* A self-concept inventory for the primary grades. April 1974, 7 pp. ED 092 582.

Educational Experience, Group Tests, *Preschool Children, *Primary Grades, *Self Concept Tests, Test Construction

Yawkey, Thomas D. and Blackwell, Jacqueline. Attitudes of 4-year old urban black children toward themselves and whites based upon multiethnic social studies materials and experience. *Journal of Educational Research,* April 1974, 67(8).

Caucasians, *Childhood Attitudes, *Negro Youth, *Self Concept, Social Studies

Elementary School Level

Allen, D. I. Student performance, attitude and self-esteem in open area and self-contained classrooms. *Alberta Journal of Educational Research,* March 1974, 20(1), 1-7.

*Academic Performance, Decision Making, Elementary School Students, *Methodology, *Open Plan Schools, School Districts, *Self Esteem, *Student Attitudes, Student Testing, Tables (Data)

Aronin, Eugene *et al.* Activity group therapy to strengthen self-concepts. *Elementary School Guidance and Counseling,* March 1974, 4(3), 233-235.

*Elementary School Counseling, Elementary School Students, *Group Counseling, *Motor Development, *Rehabilitation Counseling, *Self Concept

Banks, W. and Rompf, William James. Evaluative bias and preference behavior in black and white children. *Child Development,* December 1973, 44(4), 776-783.

*Elementary School Students, Minority Group Children, *Racial Differences, Racial Recognition, *Self Concept, Socialization

Beglis, Jeanne F. and Sheikh, Anees A. Development of the self-concept in black and white children. *Journal of Negro Education.* Winter 1974, 43(1), 104-110.

Age Differences, *Caucasian Students, *Elementary School Students, Individual Development, *Negro Students, Racial Differences, *Self Concept, Sex Differences, Urban Schools

Bentley, Ernest L. *et al.* The self-concept — Instructional objectives, curriculum sequence, and criterion referenced assessment. June 1974, 277 pp. ED 096 560.

*Child Development, *Child Psychology, Educational Programs, Elementary Education, *Research Projects, *Self Concept Tests

Black, F. William. Self-concept as related to achievement and age in learning-disabled children. *Child Development,* December 1974, 45(4), 1137-1140.

*Academic Achievement, Age, *Elementary School Students, Grades (Scholastic), *Learning Disabilities, *Reading Ability, *Self Concept, Standardized Tests

Bond, Frances T. Enhancement of self-concept through elicitation of positive self-assertive statements and positive social reinforcement. *Probe,* Winter 1974, 1(6), 37-41.

*Elementary School Students, Intervention, *Positive Reinforcement, Role Models (*Assertion), *Self Concept, *Self Esteem, *Social Reinforcement

Brown, Nina W. and Renz, Paul. Altering the reality self-concept of seventh grade culturally deprived girls in the inner city. *Adolescence,* Winter 1973, 8(32), 463-474.

Concept Formation, *Cultural Disadvantagement, *Elementary School Students, *Females, *Inner City, *Self Concept

Charlotte Drug Education Center, Inc., North Carolina. Keep out. 1973, 58 pp. ED 091 614.

*Curriculum Guides, Decision Making, *Drug Education, *Elementary School Students, Human Relations, Interpersonal Competence, *Self Esteem

Cole, J. L. The relationship of selected personality variables to academic achievement of average aptitude third graders. *Journal of Educational Research,* March 1974, 6(7), 329-333.

*Academic Achievement, *Attitudes, *Grade 3, *Motivation, *Self Concept

DiCola, Joseph Martin. Persistence of 5th graders of varying levels of self-esteem under various conditions of reinforcement. *Illinois School Research,* February 1973, 10(1). 15-21.

Data Analysis, *Elementary School Students, Methodology, *Persistence, *Reinforcement, *Self Esteem, Tables (Data)

Divney, Esther P. Helping improve a child's self-image, 1974, 5 pp. ED 091 625.

Attitude Tests, Child Development, *Childhood Attitudes, Elementary School Students, *Identification (Psychological), Negro Students, Research Review (Publications), *Role Models, *Self Concept, *Self Esteem

Dorr, Darwin *et al.* The relationship between child and teacher evaluation of self-esteem and adjustment in fourth and sixth grade children. April 1973, 18 pp. ED 088 969.

*Adjustment (to Environment), *Elementary School Students, Emotional Adjustment, *Perception, Personal Adjustment, *Self Esteem, Social Adjustment, Student Adjustment, Student Attitudes, Student Evaluation, Student Teacher Relationship, Suburban Schools, *Teacher Attitudes

Edeburn, Carl E. and Landry, Richard G. Self-concepts of students and a significant other, the teacher. *Psychological Reports,* August 1974, 35(1)1, 505-506.

Elementary Education, Elementary School Students, *Self Concept, Self Congruence, *Student Teacher Relationship, Teacher Behavior, *Teacher Influence

Edeburn, Carl E. and Landry, Richard G. Teacher self-concept and student self-concept. 1974, 24 pp. ED 088 892.

Changing Attitudes, *Elementary School Students, *Elementary School Teachers, *Self Concept, *Teacher Influence, Teachers

Gable, Robert K. and Weinland, Thomas P. Self-concept: A cross-cultural study. February 1973, 16 pp. ED 086 351.

*Cross Cultural Studies, *Cultural Differences, *Elementary School Students, Environmental Influences, *Self Concept, Sex Differences, *Social Development

Gross, Beatrice and Gross, Ronald (Eds.) *Will it grow in a classroom?* 1974, 316 pp. Available from Dell Publishing Company, Inc., 1 Dag Hammarskjold Plaza, 245 East 47th Street, New York, New York 10017 (hardcover edition, $8.95; paperback, $3.25).

*Educational Change, *Elementary School Curriculum, *Self Concept, Student Teacher Relationship, *Teacher Developed Materials, *Teacher Education, Teacher Role, Teaching Techniques

Hairston, Major T. and Cooper, Muriel F. Visual imagery: A means for improving self-concept. 1973 Evaluation. 1973, 124 pp. ED 093 297.

Communication Skills, *Culturally Disadvantaged, Elementary School Students, *Evaluation, Photography, Program Evaluation, Self Actualization, *Self Concept, Self Esteem, Student Evaluation, Visual Learning, *Visual Literacy

Hauserman, Norma *et al.* A behavioral approach to changing self-concept in elementary school children. August 1974, 12 pp. ED 097 995.

Academic Achievement, *Behavior Change, Change Strategies, *Changing Attitudes, *Elementary School Students, Negative Attitudes, Post Testing, Q Sort, *Self Concept, *Social Reinforcement

Hughes, Frances White. Self-concept development in inner-city seventh grade youth as affected by the influence of community school counseling on significant others. 1972, 270 pp. ED 085 613.

Counseling Effectiveness, *Disadvantaged Youth, Doctoral Theses, Parent Child Relationship, *Parent Counseling, *Parent Influence, *Parent School Relationship, Research Projects, Role Theory, *Self Concept, Socialization, Urban Education

Kameya, Mary Morris and Nadelman, Lorraine. Relationship of masculinity-femininity to dependency and self-esteem. October 1972, 16 pp. ED 087 984.

*Elementary School Students, *Personality Assessment, Psychological Characteristics, Research Projects, *Self Concept Tests, *Self Esteem, *Sex Differences

Kohr, Richard L. A longitudinal study of self-concept from grade 5 to grade 9. April 1974, 27 pp. ED 092 566.

*Academic Achievement, Elementary School Students, Junior High School Students, *Longitudinal Studies, *Self Esteem, *Sex Differences, *Socioeconomic Status, Testing, Test Reliability

Kokenes, Barbara. Grade level differences in factors of self-esteem. *Developmental Psychology*, November 1974, 10(6), 954-958.

*Age Differences, *Coopersmith Self Esteem Inventory, *Elementary School Students, *Factor Analysis, Parent Child Relationship, Peer Relationship, *Self Esteem, Student School Relationship, *Test Validity

Levitan, Harvey. The implications of the relationship between self-concept and academic achievement. *Child Study Journal,* 1975, 5(1), 25-36.

*Academic Achievement, *Elementary School Students, Instructional Program Divisions, *Literature Reviews, *Self Concept, Sex Differences, Socioeconomic Status, Standardized Tests, *Teacher Influence

Linn-Mar Community School District, Marion, Iowa. All about me. 1972, 94 pp. ED 090 376

*Career Education, *Elementary Grades, Individual Development, *Integrated Curriculum, *Self Concept, *Teaching Guides

Loney, Jan. The relationship between impulse control and self-esteem in school children. *Psychology in the Schools,* October 1974, 11(4), 462-466.

*Behavior Patterns, Elementary Education, *Elementary School Students, Projective Tests, Rating Scales, *Relationships, Research Projects, *Self Control, *Self Esteem, Teachers

Many, Wesley *et al.* A self-concept scale for middle childhood. *Journal of the Association for the Study of Perception,* February 1974, 9(2). 14-35.

*Behavior Rating Scales, *Behavior Theories, *Childhood Attitudes, *Measurement Instruments, *Self Concept

Marx, Ronald W. and Winne, Philip H. Self-concept and achievement: Implications for educational programs. *Integrated Education,* 1975, 13(1), 30-31.

*Academic Achievement, Elementary Grades, *Negro Youth, *Self Concept, *Self Concept Tests, *Self Esteem

Marx, Ronald W. and Winne, Philip H. A validation study of self-concept in low SES black children with implications for educational programs. April 1974, 17 pp. ED 090 306.

*Academic Achievement, Educational Programs, Elementary School Students, *Lower Class Students, Minority Group Children, *Negro Youth, *Self Concept, *Validity

Miller, G. Dean (Ed.) Additional studies in elementary school guidance: Psychological education activities evaluated. 1973, 445 pp. ED 085 617.

Communication Skills, *Elementary School Guidance, *Elementary School Teachers, Guidance Programs, *Parent School Relationship, Peer Relationship, Program Evaluation, *Psychoeducational Processes, *Self Concept, Student Development

Morrow, William R. Self-concept changes following behavior modification. Final report. August 1974, 17 pp. ED 103 499.

*Behavior Change, Behavior Problems, Change Agents, *Changing Attitudes, *Elementary School Students, Inner City, *Operant Conditioning, Parent Role, Psychological Testing, *Self Concept, Student Attitudes, Student Behavior, Teacher Role, Test Reliability, Test Validity

Nowicki, Stephen and Walker, Charlotte. The role of generalized and specific expectancies in determining academic achievement. 1973, 6 pp. ED 085 075.

*Academic Achievement, Aspiration, *Elementary School Students, *Expectation, Grade 5, Grade 6, *Locus of Control, *Self Concept

Olsen, Henry D. and Cater, Donald E. Social psychological impact of geographical location among disadvantaged rural and urban intermediate grade children. *Child Study Journal*, 1974, 4(2), 81-92.

*Academic Achievement, Age Differences, *Disadvantaged Youth, *Intermediate Grades, Rural Youth, *Self Concept, Sex Differences, *Social Psychology, Symbolic Learning, Urban Youth

Parker, Harvey C. Contingency management and concomitant changes in elementary school students' self-concepts. *Psychology in the Schools*, January 1974, 11(1), 70-78.

Behavioral Science Research, *Behavior Change, Class Management, *Classroom Communication, Elementary School Students, Personal Adjustment, *Self Concept, Social Adjustment

Primavera, Louis H. The relationship between self-esteem and academic achievement: An investigation of sex differences. *Psychology in the Schools*, 1974, 11(2), 213-216.

*Academic Achievement, Elementary School Students, Performance Factors, *Self Concept, *Self Esteem, Sex Differences, Student Behavior

Rodgers, Harrell R., Jr. Racial pride and black children. *Integrated Education*, July-October 1973, 11(4), 62-63.

*Elementary School Students, Individual Characteristics, Inner City, *Integration Effects, *Negro Students, *Racial Recognition, Race Relations, *Self Esteem, School Integration, School Segregation

Scheirer, Mary Ann. A study of the effects of open classroom education on children's achievement, self-concepts and attitudes. 1972, 74 pp. ED 085 423.

*Academic Achievement, Affective Behavior, *Elementary School Students, *Open Education, *Self Concept, *Student Attitudes, Traditional Schools

Schulman, Jerome L. *et al.* A classroom program to improve self-concept. *Psychology in the Schools,* 1973, 10(4), 481-486.

Elementary School Students, *Human Relations Units, Mental Health Programs, Personality, *Self Concept, *Self Concept Tests, *Self Esteem, *Student Development

Sciara, Frank J. Project BIG (Black image growth). Model Cities Schools, Indianapolis Public Schools. Final report. July 1972, 22 pp. ED 094 010.

*Changing Attitudes, Curriculum Development, Economically Disadvantaged, Elementary School Students, Federal Programs, Identification (Psychological), *Inner City, Instructional Materials, Negro History, *Negro Students, Program Evaluation, Self Concept, *Self Esteem

Shelver, Janet. Self-awareness test instrument. Final report. July 1973, 34 pp. ED 097 535.

*Career Awareness, *Career Education, Comparative Analysis, Elementary Grades, *Self Concept Tests, Test Results

Snyder, Doris C. Said the mirror, "It is good." *Reading Teacher,* December 1974, 28(3), 273-276.

Elementary Grades, Reading, Reading Improvement, *Reading Instruction, *Self Concept, *Teaching Techniques

Trosky, Odarka S. Individualizing through a self-concept inventory at the primary levels. May 1974, 37 pp. ED 092 886.

Educational Research, *Individualized Instruction, *Individual Needs, *Primary Grades, Reading, Self Concept, *Self Concept Tests, Teaching Methods, *Test Construction

Valusek, John E. Buckets and dippers. *Educational Horizons,* February 1973, 52(1), 7-9.

*Anti Social Behavior, Attitudes, Behavior Patterns, *Children, *Concept Formation, *Emotional Response, *Self Concept

Watertown Independent School District 1, South Dakota. Self-awareness: Elementary career education guide. Volume 1. August 1973, 91 pp. ED 086 821.

*Career Education, Early Childhood Education, Elementary Grades, Primary Grades, *Resource Guides, *Resource Materials, *Self Concept

Whiting, Tommye B. The inadequacy of traditional self-concept instruments for culturally different elementary school children. April 1974, 14 pp. ED 093 952.

Culturally Disadvantaged, *Locus of Control, *Minority Group Children, Questionnaires, *Self Concept Tests, *Test Construction, Test Validity

Whitmore, Joanne Rand. The modification of undesirable attitudes and classroom behavior through constructive use of social power in the school peer culture. August 1973, 208 pp. ED 084 489.

*Behavior Change, *Discipline Problems, Elementary School Students, Leadership, Locus of Control, Low Income Groups, Models, Peer Groups, *Reinforcement, *Self Concept, Social Behavior, Student Attitudes, *Youth Leaders

Winn, Mitchell. *The drug alternative.* 1974, 64 pp. Available from American Alliance for Health, Physical Education and Recreation, 1201 - 16th Street, N.W., Washington, D. C. 20036 (no price indicated).

Books, *Decision Making, *Drug Abuse, *Elementary Secondary Education, *Future (of Society), *Individual Development, *Self Esteem, State of the Art Reviews, Values, Youth

Withycombe, Jeraldine S. Relationships of self-concept, social status, and self-perceived social status and racial differences of Paiute Indian and white elementary school children. *Journal of Social Psychology,* December 1973, 91, 337-338.

*American Indians, Elementary School Students, *Racial Differences, *Self Concept, Social Attitudes, *Social Status

Wylie, Richard E. Sex roles in a changing society. *Childhood Education,* November 1973, 50(2), 115-117.

*Early Childhood Education, *Elementary School Students, *Self Concept, *Sex Differences, Socialization, *Stereotypes

High School Level

Berry, Gordon L. Concept and need factors of inner-city high school adolescents and dropouts. *Child Study Journal,* 1974, 4(1).

*Achievement Need, Adolescents, *Disadvantaged Youth, *Dropout Attitudes, *High School Students, *Self Concept, Urban Schools

Bledsoe, Joseph C. and Wiggins, Gene R. Self-concepts and academic aspiration of "understood" and "misunderstood" boys and girls in ninth grade. *Psychological Reports,* August 1974, 35(1), 57-58.

*Academic Aspiration, Adolescents, Comparative Analysis, Interaction, *Parent Child Relationship, *Self Concept, Sex Differences

Brunner, Joan Caroline and Starkey, John. Interpersonal relationships and the self-concept. 1974, 6 pp. ED 089 515.

Average Students, Emotionally Disturbed, *Exceptional Child Research, *Interpersonal Relationship, Learning Disabilities, *Remedial Instruction, *Secondary School Students, *Self Concept

Cohen, L. Labelling and alienation in a British secondary school. *Educational Review,* February 1974, 26(2), 100-108.

Educational Research, Reinforcement, Sampling, *Secondary Schools, *Self Concept, *Self Esteem, *Student Alienation, Tables (Data)

Cooper, James G. Mirror, mirror on the wall: Adolescent self-concept in four countries. May 1974, 20 pp. ED 101 004.

*Adolescents, American Indians, Anglo Americans, Chinese, Comparative Analysis, *Cross Cultural Studies, Cultural Differences, *Foreign Students, High School Students, Mexican Americans, Mexicans, Rural Youth, School Attitudes, *Self Concept, Self Concept Tests, Semantic Differential, Social Attitudes

Dillingham, McKinley and Johnson, T. Bradford. The effect of teacher attitudes and self-concept of students on academic success. *Education for the Disadvantaged Child,* February 1973, 1(4), 15-21.

*Academic Achievement, Inner City, *Negro Students, *Secondary School Students, *Self Concept, Success Factors, Teacher Attitudes, *Teacher Influence, Urban Teaching

Eckstein, Daniel G. An investigation of self-concept differences and the use of group counseling with incarcerated and nonincarcerated juvenile delinquents. February 1973, 11 pp. ED 099 715.

Adolescents, *Counseling Effectiveness, *Delinquency, Delinquent Rehabilitation, *Group Counseling, Institutionalized (Persons), *Rehabilitation Counseling, *Self Concept, Speeches

Frank, Marjorie *et al.* Peer group counseling: A challenge to grow. *School Counselor,* March 1975, 22(4), 267-272.

*Group Counseling, Helping Relationship, *Interpersonal Relationship, *Peer Counseling, Program Descriptions, Secondary Education, *Self Concept

Frey, Sherman *et al.* A self-concept scale for adolescents. *Journal of the Association for the Study of Perception,* February 1973, 8(2), 10-29.

*Adolescents, *Developmental Tasks, Individual Characteristics, *Self Concept Tests, *Self Evaluation

Gilbert, Gwendolyn C. Counseling black adolescent parents. *Social Work,* January 1974, 19(1), 88-94.

Adolescents, *Counselor Role, *Illegitimate Births, *Negro Students, Parent Counseling, *Self Concept, Social Problems, Social Work, *Unwed Mothers

Hamlin, Bette. Awareness experiences for school use. 1975, 73 pp. ED 102 545.

Identification (Psychological), *Interpersonal Relationship, Learning Activities, Learning Processes, *Perception, Personal Values, Responsibility, Secondary Education, *Self Actualization, *Self Concept, *Self Expression, Social Values, Teaching Guides

Healey, Gary W. and DeBlassie, Richard R. A comparison of Negro, Anglo, and Spanish American adolescents' self-concepts. *Adolescence,* Spring 1974, 9(33), 15-24.

*Adolescents, Critical Thinking, *Ethnic Groups, *Negro Attitudes, Secondary School Students, *Self Concept, *Spanish Americans, Tables (Data)

Hughes, Ronald E. and Works, Ernest. The self-concepts of black students in a predominantly white and in a predominantly black high school. *Sociology and Social Research,* October 1974, 59(1), 50-54.

Caucasians, *Comparative Analysis, *High School Students, *Negro Students, *Self Concept, *Seniors, Sex Differences

Loughary, John W. and Ripley, Theresa. Career survival skills: Focus on affective career education. Teacher's manual. 1974, 152 pp. ED 092 718.

Behavioral Objectives, *Career Education, Career Opportunities, Career Planning, Careers, Decision Making, Elementary School Students, High School Students, Junior High School Students, *Self Concept, *Student Development, *Teaching Guides, Teaching Procedures, *Vocational Development

Musa, Kathleen E. and Roach, Mary Ellen. Adolescent appearance and self-concept. *Adolescence,* February 1973, 8(31), 385-394.

*Adolescents, Data Analysis, Females, Males, *Measurement, *Self Concept, *Self Evaluation, Tables (Data)

Powell, Gloria J. Black Monday's children: A study of the effects of school desegregation on self-concept of southern children. 1973, 334 pp. ED 086 780.

*Integration Effects, Integration Litigation, *Negro Students, Public Schools, Racial Differences, Racial Recognition, *School Integration, Secondary School Students, *Self Concept, *Southern Schools, Supreme Court Litigation, Urban Schools

Prendergast, P. *et al.* Self-image among a national probability sample of girls. *Child Study Journal,* 1974, 4(3), 103-114.

*Adolescents, *Caucasians, Disadvantaged Youth, *Females, Interpersonal Relationship, *Negroes, Race, *Self Concept, Social Class, Urban Culture

Rubin, Roger H. Male absence and the self-attitudes of black children. *Child Study Journal,* 1974, 4(1), 33-46.

Adolescents, *Fatherless Family, *Lower Class Males, *Negro Youth, *Racial Differences, *Self Concept, Sex Differences

Snow, David L. and Held, Mark L. Group psychotherapy with obese adolescent females. *Adolescence,* February 1973, 8(31), 407-414.

*Adolescents, *Females, *Group Therapy, *Physical Health, Psychology, *Self Esteem, Social Attitudes, Social Problems

Soares, Anthony T. and Soares, Louise M. Significant others and self-perception of disadvantaged students. April 1974, 8 pp. ED 094 025.

Caucasian Students, Disadvantaged Youth, Economically Disadvantaged, Family Background, Negro Students, *Parent Attitudes, Puerto Ricans, *Secondary School Students, *Self Concept, Self Concept Tests, Self Esteem, Self Evaluation, *Social Differences, *Teacher Attitudes, Urban Youth

Street, Paul *et al.* How Eastern Kentucky high school seniors view themselves vis-a-vis their schools. February 1972, 13 pp. ED 085 164.

Educational Environment, Improvement, *Rural Schools, *School Role, *Self Concept, *Seniors, *Student Attitudes, Tables (Data)

Suzuki, Michael G. Differences between self-concept of Mennonite adolescents and public school adolescents. 1974, 17 pp. ED 090 073.

*Adolescents, Aspiration, Comparative Analysis, *Educational Research, Grade 12, Religious Factors, School Surveys, *Self Concept, *Self Evaluation, *Student Attitudes

Wiggins, R. Gene. Differences in self-perception of ninth grade boys and girls. *Adolescence,* Winter 1973, 8(32), 491-496.

Analysis, *Research Design, Secondary School Students, *Self Concept, Tables (Data)

General Studies and Articles on Children's Self-Concept

Alexander, Rebecca Bradbeer. Inner equipment for family living. *Childhood Education,* November 1973, 50(2), 90-95.

*Adults, Anxiety, *Childhood Attitudes, Child Rearing, Individual Needs, *Parent Child Relationship, Psychology, *Self Actualization, *Self Concept

Baran, Stanley J. Pro and antisocial television content and modeling by high and low self-esteem children. April 1974, 21 pp. ED 090 598.

*Anti Social Behavior, Behavior Patterns, Child Development, *Children, Individual Differences, Mass Media, *Programming (Broadcast), Self Concept, *Self Esteem, Social Behavior, *Television

Baran, Stanley J. Prosocial and antisocial television contents and modeling by high and low self-esteem children. *Journal of Broadcasting*, February 1974, 18(4), 481-495.

*Antisocial Behavior, *Children, Programming (Broadcast), Role Models, *Self Esteem, Social Attitudes, Television, *Television Research

Bolling, John L. The changing self-concept of black children. *Journal of the National Medical Association*, January 1974, 66(1), 28-34.

Child Development, Ethnic Groups, *Identification (Psychological), *Negro Youth, Personal Adjustment, *Self Concept Tests, Self Esteem, *Self Evaluation

Burgy, Dianne R. Developing good teachers by strengthening student teachers' self-concepts. 1972, 10 pp. ED 087 774.

Effective Teaching, *Self Concept, *Student Teachers, Student Teaching, Supervisors, Supervisory Methods, Teacher Education, Teacher Experience, Teacher Supervision

Cox, Samuel H. The association of peer acceptance-rejection with children's perception of parental behaviors. *Psychology in the Schools*, 1974, 11(2), 222-225.

Child Development, *Family Influence, Maladjustment, *Parent Child Relationship, *Peer Acceptance, *Self Esteem

Dillon, Stephen V. and Franks, David D. Open learning environment. *Educational Forum*, January 1975, 39(2), 155-161.

*Adjustment (to Environment), Child Development, *Educational Environment, *Open Education, Problem Solving, *Self Concept, *Student Evaluation, Student Experience

Divney, Esther P. First, they are children. 1974, 5 pp. ED 091 624.

*Body Image, *Child Development, Disadvantaged Environment, Disadvantaged Students, *Identification (Psychological), *Individual Differences, Learning Readiness, Literature Reviews, *Self Concept, Self Esteem

Fouts, Gregory T. The effect on self-modeling on behavior and self-esteem. 1974, 6 pp ED 103 104.

*Behavior Change, Case Studies, Intervention, *Learning Disabilities, Observational Learning, *Positive Reinforcement, *Problem Children, Role Models, Self Concept Tests, *Self Esteem, Socialization

Fryrear, Jerry L. *et al.* Photographic self-concept enhancement of male juvenile delinquents. *Journal of Consulting and Clinical Psychology,* December 1974, 42(6), 915.

*Behavior Change, *Delinquents, Identification (Psychological), Males, *Prediction, Research Projects, *Self Concept, *Socialization, *Tennessee Self Concept Scale

Gecas, Victor *et al.* The development of self-concept in the child: Mirror theory versus model theory. *Journal of Social Psychology,* February 1974, 92, 67-76.

*Child Development, Family Relationship, Imitation, Parent Child Relationship, Role Models, *Self Concept, *Socialization

Howard, Norma K. Self-concept: An abstract bibliography. May 1974, 58 pp. ED 091 085.

*Annotated Bibliographies, *Early Childhood, Migrant Children, Minority Groups, Parent Child Relationship, *Personality Development, Program Descriptions, Racial Attitudes, *Self Concept, *Self Esteem, Sex Differences, Socioeconomic Status, Special Education, Student Teacher Relationship

Kempton, Patricia C. Blame the black child — His textbooks do. *Journal of Open Education,* Winter 1974, 2(2), 85-93.

African American Studies, Booklists, *Negroes, Racism, Resource Materials, *Self Concept, Stereotypes, Teacher Role, *Textbook Bias

Kern, Charles R. Improving relationships: White principal, black student. *NASSP Bulletin,* March 1975, 59(389), 34-38.

*Administrator Attitudes, *Negro Students, *Problem Solving, *Self Concept, *Student Attitudes

Kooche', Gerald P. Emerging selfhood and cognitive development. *Journal of Genetic Psychology,* September 1974, 125(1), 78-88.

*Children, *Cognitive Development, Intelligence Quotient, *Personality Development, *Self Concept, Socioeconomic Influence, Standardized Tests

Ladner, Joyce A. Labeling black children: Social-psychological implications. *Journal of Afro-American Issues,* Winter 1975, 3(1), 43-52.

Classification, *Grouping (Instructional Purposes), Identification (Psychological), Negro Stereotypes, *Negro Youth, *Racial Discrimination, Racism, *Self Concept, Self Esteem, *Student Evaluation

McNelly, Frederick W., Jr. Development of the self-concept in childhood. December 1972, 32 pp. ED 086 318.

Anxiety, Aspiration, *Childhood, Concept Formation, Demography, Family Background, *Literature Reviews, *Mental Health, Parent Child Relationship, *Personality Development, Psychological Patterns, Psychosis, Research Methodology, Schizophrenia, *Self Concept

Ostrom, Gladys. The self-concept of gifted children grows through freedom of movement and freedom to do what is right. *Gifted Child Quarterly,* Winter 1973, 17(4), 285-287.

*Environmental Influences, *Exceptional Child Education, *Gifted, *Parent Role, School Role, *Self Concept

Simon, Sidney B. I am loveable and capable. A modern allegory of the classical put-down. 1973, 32 pp. ED 086 582.

Affection, *Allegory, Classroom Materials, *Dramatic Play, Human Dignity, *Humanization, *Human Relations, Individual Needs, Instructional Materials, Interpersonal Relationship, Needs, Self Concept, *Self Esteem

Thomas, Susan B. Concerns about gifted children: A paper and abstract bibliography. February 1974, 44 pp. ED 091 083.

*Annotated Bibliographies, *Children, Creativity, *Exceptional Child Education, *Gifted, Program Descriptions, *Self Concept, Special Programs, Talented Students, Underachievers

Thorsell, Bernard and Chambers, Robert. The adjudication process and self-conception. August 1974, 25 pp. ED 096 598.

*Court Litigation, *Cultural Factors, *Delinquents, Psychological Characteristics, Racial Differences, *Self Concept, *Sociocultural Patterns, Speeches, Youth Problems

Washington, Kenneth R. Self-concept development: An effective educational experience for inner-city teachers. *Young Children,* July 1974, 29(5), 305-310.

Affective Behavior, *Inservice Education, *Instructional Improvement, *Self Concept, Student Teacher Relationship, *Teacher Education, Teacher Role, *Urban Teaching

West, Charles K. and Fish, James A. Relationships between self-concept and school achievement: A survey of empirical investigations. Final report. December 1973, 41 pp. ED 092 239.

*Academic Achievement, *Behavioral Science Research, Factor Analysis, *Literature Reviews, Measurement, Racial Factors, Research Methodology, Research Problems, *Self Concept, Sex Differences, Socioeconomic Influences

Whitehurst, Keturah E. Techniques and processes of socialization of the black child. July 1972, 22 pp. ED 097 963.

*Cultural Awareness, Identification (Psychological), Language Usage, *Negro Youth, *Racial Attitudes, Racial Discrimination, Self Actualization, *Self Concept, Social Development, Socialization, Values

Wittek, M. J. Reflections of the gifted by the gifted on the gifted. *Gifted Child Quarterly,* Winter 1973, 17(4), 250-253.

Childhood, *Exceptional Child Research, Gifted, *High Achievers, *Questionnaires, Self Actualization, *Self Concept, *Self Evaluation

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LONG-TERM RESEARCH

Note: The reports in this section concern research programs that are continuous.

35-AA-1 LONGITUDINAL STUDY OF CHILD GROWTH AND DEVELOPMENT

Investigator(s): Frank Falkner, M.D., F.R.C.P., Director; Alexander F. Roche, M.D., Ph.D., Chief, Section on Physical Growth and Genetics; and Robert McCall, Ph.D., Chief, Section on Perceptual/Cognitive Development, Fels Research Institute for the Study of Human Development, 800 Livermore Street, Yellow Springs, Ohio 45387.
Purpose: To conduct a multidisciplinary study of children whose health, growth, psychological development, and environment have been studied since birth, with prenatal and genetic information; and to determine normative patterns of growth and development in human subjects.
Subjects: Over 800 subjects: from present infants to adults with their children in study. The subjects are healthy, from rural and urban areas, and from upper-lower to middle class backgrounds.
Methods: A multidisciplinary longitudinal study is being conducted with regular visits and use of appropriate analyses and computer methodology.
Duration: 1930-continuing.
Cooperating group(s): Public Health Service, U. S. Department of Health, Education, and Welfare; National Science Foundation; Samuel S. Fels Fund; U. S. Air Force.
Publications: Information is available from the investigator on approximately 1,022 publications that have been completed to date.

35-AA-2 DEVELOPMENT OF BUDGETS FOR CLOTHING AND HOUSEHOLD TEXTILES

Investigator(s): Virginia Britton, Ph.D., Home Economist, Consumer and Food Economics Institute, Agricultural Research Service, U. S. Department of Agriculture, Federal Center Building No. 1, Hyattsville, Maryland 20782.
Purpose: To develop and update current household clothing budgets taking into account known physiological and sociopsychological needs, clothing habits, income and other resources of various population groups, and the prices and availability of clothing items.
Subjects: 12,000 children in 6,000 families with husband and wife and one to five children, but with no other persons living in the home.
Methods: Data were gathered from the 1960-61 Survey of Consumer Expenditures by the Bureau of Labor Statistics and the U. S. Department of Agriculture. Budgets for children were computed using regression methods for three economic levels of the USDA food plans — economy, low cost, and moderate cost. Separate clothing budgets were computed for boys and girls categorized by age, region, and urbanization. Budgets will be published as total expenditures for children's clothing (updated to current price levels) and in garment equivalent units.
Findings: Budget costs for boys tended to equal comparable budgets for girls at the economy level. However, at higher budget levels, boys' costs were substantially less than girls' budgets.

This was especially true for older children. Cost differences between clothing budget levels were substantially greater than between food plans, reflecting the greater elasticity of clothing expenditures. The majority of farm budgets and rural nonfarm budgets was about equal to the comparable urban budgets.
Duration: 1962-continuing.
Publications: Britton, V. Clothing budgets for children from the USDA: Annual costs at three levels in four regions. *Home Economics Research Journal,* March 1973, 1(3), 173-184. (Reprints are available from Sales Office, American Home Economics Association, 2010 Massachusetts Avenue, N.W., Washington, D. C. 20036. Price, $1.00.)

35-AA-3 CHILD HEALTH AND DEVELOPMENT STUDIES

Investigator(s): Jacob Yerushalmy, Ph.D., Professor of Biostatistics, School of Public Health, University of California at Berkeley, Berkeley, California 94720; Stephen Thomas, M.D., Director, Department of Obstetrics and Gynecology; and Edgar Schoen, M.D., Director, Department of Pediatrics, Kaiser Foundation Hospital, Oakland, California 94611.
Purpose: To investigate the relationship of parents' biologic, genetic, and environmental influences (including events during pregnancy, labor, and delivery) to the normal and abnormal development of offspring.
Subjects: Members of the Kaiser Foundation Health Plan (a prepaid medical care program) who reside in the San Francisco-East Bay area.
Methods: Expected byproducts of the investigation are the relationships of factors studied to (1) wasted pregnancies in the form of early fetal death, perinatal mortality, infant and child mortality; and (2) estimates of the incidence of different types of abnormalities. The study is a prospective, longitudinal type involving both mother and child. Gravidas in the Department of Obstetrics and children in the Pediatric Department are observed, interviewed, and given laboratory examinations. Physicians' observations are systematized uniformly. Special efforts are made to obtain information on members of the study who do not return to the plan for medical care. Detailed growth curves for children, ages birth to 6, and estimates of illnesses and injuries in infancy and the preschool child will be derived on a longitudinal basis.
Duration: July 1959-continuing.
Cooperating group(s): Permanente Medical Group; Kaiser Foundation Research Institute.
Publications: (1) *Journal of Pediatrics,* August 1967, 71(2), 164-172. (2) *Pediatrics,* 1967, 39, 940-941. (3) *American Journal of Obstetrics and Gynecology,* February 1964, 88(4), 505-518.

35-AA-4 THE BERKELEY, CALIFORNIA GROWTH STUDY

Investigator(s): Dorothy H. Eichorn, Ph.D., Research Psychologist, Institute of Human Development, University of California at Berkeley, Berkeley, California 94720.
Purpose: To study the mental and physical growth of normally healthy persons from birth to the present.
Subjects: 60 full-term, healthy newborns, born in Berkeley hospitals from 1928 to 1929 of white, English-speaking parents; and 140 offspring of these subjects, ages birth to 20, seen irregularly.
Methods: The same data, appropriate for age, were collected for the subjects and their offspring. Beginning in the first week of life, tests of mental and motor development, pediatric examinations, and interviews were conducted at frequent intervals during growth. At all visits, inquiries were made concerning current health and recent illnesses. Anthropometrics, body

photographs, and skeletal X-rays were taken at most ages. Socioeconomic data were collected. Studies of the physical aspects of growth include analyses that compare health histories with physical growth and with skeletal maturation. Emotional and other personality variables are being studied for consistency, and in various interrelations with maternal behavior in infancy, birth histories, socioeconomic status, and intellectual and physical growth.
Duration: 1928-continuing.
Publications: *American Psychologist,* 1968, 23(1), 1-17; *Monograph of the Society for Research in Child Development,* 1963, 28; Bayer, Leona and Bayley, Nancy. *Growth diagnosis: Selected methods for interpreting and predicting physical development from one year to maturity.* Chicago: University of Chicago Press, 1959.

35-AA-5 GROWTH OF PSYCHOPHYSIOLOGICAL PATTERNS IN INFANCY

Investigator(s): Wagner H. Bridger, M.D., Associate Professor of Psychiatry; and Beverly Birns, Ph.D., Assistant Professor of Psychology, Albert Einstein College of Medicine, Yeshiva University, Bronx, New York 10461.
Purpose: To investigate the origins and course of development of individual differences in neonates.
Subjects: Normal, healthy, full-term babies, 2 to 5 days old, born at Bronx Municipal Hospital Center.
Methods: A neonatal behavioral profile, which was established in previous studies, will be used. The profile includes behavioral and heart rate ratings on excitation, soothing, feeding, sleep, and nonstimulus periods of observation. Neonates will be followed at ages 2 weeks, and 1, 2, 3, and 4 months to measure the stability of early appearing traits and their relation to later behaviors. Data will be analyzed with respect to stability of early appearing behaviors and the relationship between neonatal behavior and maternal and birth history.
Duration: 1966-continuing.
Cooperating group(s): National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: (1) Grant Newton and Seymour Levine (Eds.), *Early experience and hebavior: Psychobiology of development.* Springfield, Illinois: Charles C. Thomas, 1968. (2) *Psychosomatic Medicine,* 1966, 28, 316.

35-AA-6 LONGITUDINAL STUDY OF DENTOFACIAL SKELETAL, PHYSICAL GROWTH, AND NUTRITION OF CHILDREN

Investigator(s): Bhim S. Savara, D.M.D., M.S., Chairman, Child Study Clinic, School of Dentistry, Health Sciences Center, University of Oregon, Portland, Oregon 97201.
Purpose: To study the dentofacial growth of children, assessment of skeletal age related to facial growth, and variations in physique and its effect on dentofacial growth; and to determine heritable traits.
Subjects: 420 children, including 40 pairs of twins, ages 3 to 20. 300 children have been observed for more than 15 years.
Methods: Cephalograms, hand, wrist, and calf X-rays, intraoral X-rays, study casts, anthropometric measurements, and photographs are taken; and oral examinations are administered to the subjects. Children are examined every 6 months until they are 14 years old.
Findings: See publication references listed below.
Duration: 1950-continuing.

Cooperating group(s): University of Oregon Health Sciences Center, School of Dentistry; National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: *Angle Orthodontist,* 1968, 38, 104-120; *American Journal of Orthodontics,* 1969, 55, 133-153; *American Journal of Physical Anthropology,* 1969, 30(2), 315-318; *Bulletin of the Academy of General Dentistry,* June 1969, 27-31; *Journal of Dentistry for Children,* November-December 1969, 1-4; *American Journal of Orthodontics,* 1970, 57(6), 561-572; *Journal of Dental Research,* 1970, 49(4), 885; *Advances in Oral Biology,* New York: Academic Press, Inc., 1970. Pp. 1-9; *Journal of the American Dental Association,* 1970, 81, 653-661; *Oral Health,* 1971, 61(10), 19-28; *American Journal of Orthodontics,* 1971, 59(5), 488-500; *Symposium on Close-Range Photogrammetry.* Urbana: University of Illinois, 1971. Pp. 365-369; *Angle Orthodontist,* 1972, 42(1), 35-43; *American Journal of Orthodontics,* 1972, 61(3), 231-245; *American Journal of Orthodontics,* 1972, 61(4), 345-352; *Cleft Palate Journal,* 1972, 9(2), 119-131; *American Journal of Orthodontics,* 1972, 61(6), 693-618; *Angle Orthodontist,* 1973, 43(2), 207-215; *American Journal of Orthodontics,* 1973, 63(6), 610-621; *American Journal of Physical Anthropology,* 1973, 39, 49-56; *American Journal of Orthodontics,* 1973, 64(3), 248-257; *American Journal of Orthodontics,* 1974, 66(5), 479-486; *Human Biology,* 1974, 46(4), 693-698.

35-AA-7 NEW RADIOGRAPHIC STANDARDS OF REFERENCE FOR SKELETAL DEVELOPMENT OF CHILDREN AND STANDARDS IN PREPARATION

Investigator(s): S. Idell Pyle, Ph.D., Research Associate in Anatomy, School of Medicine, Case Western Reserve University, Cleveland, Ohio 44106; William W. Greulich, Ph.D., Research Biologist, National Institute of Child Health and Human Development, Bethesda, Maryland 20014; and staff of the National Center for Health Statistics involved in the National Health Survey, Public Health Service, U. S. Department of Health, Education, and Welfare, Washington, D. C. 20201.

Purpose: To develop radiographic standards of reference for skeletal development of children to provide a basis for identifying maturity levels of growing bones in the hands, elbows, shoulders, hips, knees, and feet of children and youths according to the shapes of the bone shadows in an X-ray film.

Subjects: Approximately 1,000 healthy individuals in Cleveland and Boston.

Methods: The bone shadows in an X-ray film display a modal rate of growth of each bone by illustrating regularly occurring osseous features which develop in series in the surface of the bone cortex as it calcifies. A reference standard consists of films arranged as a series to show sequential osseous features which are alike in males and females. It is an instrument for measuring the skeletal maturity level of children. Films of the subjects, covering the full span of growth from birth to adulthood, have been used to prepare standards. A standard of reference for joints in the upper extremity is in preparation, with the section on the hand and wrist showing the application of cardinal maturity indicators of individual bones to handwrist bones which are anomalous in the number of their bone growth centers. For published standards, see publication references listed below.

Cooperating group(s): Bolton-Brush Growth Study Center, Case Western Reserve University, Cleveland; Department of Maternal and Child Health, Harvard University School of Public Health, Boston; National Center for Health Statistics, Rockville, Maryland; Departments of Pediatrics and Endocrinology, Henry Ford Hospital, Detroit; Merrill-Palmer Institute, Detroit; Department of Education, Eastern Michigan University, Ypsilanti.

Publications: (1) Greulich, W. W. and Pyle, S. I. *A radiographic atlas of skeletal development of the hand and wrist* (2nd ed.) Stanford, California: Stanford University Press, 1959. (2) Hoerr, N. L.; Pyle, S. I.; and Francis, C. C. *A radiographic atlas of skeletal development of the foot and ankle* (1st ed.) Springfield, Illinois: Charles C. Thomas, 1962. (3) Pyle, S. I. and Hoerr, N. L. *A standard of reference for the growing knee.* (2nd ed.) Springfield, Illinois: Charles C. Thomas, 1969. (4) Pyle, S. I.; Waterhouse, A. M.; and Greulich, W. W. *A standard of reference for the growing hand and wrist.* (1st ed.) Cleveland: The Press of Case Western Reserve University, 1971.

35-AA-8 METHODS IN CHARACTER DEVELOPMENT

Investigator(s): Ernest M. Ligon, Ph.D., Director; and staff, Union College Character Research Project, 10 Nott Terrace, Schenectady, New York 12308.
Purpose: To develop more effective methods in character development in cooperation with families and character training agencies. (Character is defined in terms of three dimensions: philosophy of values, breadth of social vision, and strength of purpose.)
Subjects: Children and families throughout the United States. The families belong to churches, YMCAs, and schools but participate in the study as individual families.
Methods: Procedures of the research are based on action research, in which the participants cooperate with the laboratory and use methods of coscientist research. Open-ended reports on research goals constitute the basic body of research data. An analysis of these data serves as the basis for the development of new procedures and for the scientific reports that are published concerning it.
Findings: Reports have been prepared concerning hypotheses tested in the home and character building agencies. Most of the findings relate to the home, learning, decision making, and methods for character development, plus descriptions of age level potentials, especially for decision making.
Duration: 1935-continuing.
Cooperating group(s): Lilly Endowment, Inc.
Publications: Catalog: *Attitude Education and Character Development,* which lists 44 publications and includes a price list, is available from the investigator.

35-AA-9 LONGITUDINAL GROWTH STUDIES OF CHILDREN WITH CRANIOFACIAL BIRTH DEFECTS

Investigator(s): Samuel Pruzansky, D.D.S., Director, Center for Craniofacial Anomalies, Medical Center, University of Illinois, P. O. Box 6998, Chicago, Illinois 60680.
Purpose: To study the epidemiology, genetics, morphology, physiology, and postnatal development; and to plot the natural history of children with craniofacial birth defects.
Subjects: Over 3,000 subjects, males and females, from infancy to adulthood.
Methods: The subjects were initially studied as infants. Procedures include roentgenocephalometry, tomography, dental casts, and photographs. Speech and hearing, psychosocial, and pediatric evaluations supplied additional information.
Findings: Patterns of growth have been delineated that are useful in clinical management. Some conditions have been shown to get worse; some show spontaneous improvement; and others remain unchanged. Syndrome-specific cranial morphologies have been described and genetic significance has been described.
Cooperating group(s): Illinois State Pediatric Institute; Division of Services for Crippled Children, University of Illinois; Cook County Children's Hospital; Division of Research, Maternal and Child Health Services, National Institutes of Health, Public Health Service, U. S.

Department of Health, Education, and Welfare; National Institute of Dental Research, National Indtitutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: *Cleft Palate Journal,* 1971, 8, 239. A list of articles in journals of dentistry, medicine, public health, speech and hearing, and psychology is available from the investigator.

35-AA-10 YOUTH REPORTS

Investigator(s): Cecelia E. Sudia, M.A., Research and Evaluation Division, Children's Bureau, Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare, P. O. Box 1182, Washington, D. C. 20013.

Purpose: To collect and analyze opinions and values of high school age youths.

Subjects: 250 high school students.

Methods: Students were randomly selected from youth enrolled in college preparatory courses in high schools chosen to cover urban and suburban schools in each of 12 metropolitan areas in the United States. Each student was sent a set of short, open-ended questions and asked to report on the range of opinions in his school or neighborhood group. It is anticipated that the panel will be interviewed in this way two or three times a year. Replies are coded for content; analysis is both quantitative and qualitative.

Findings: The method of mail interview is successful with this group of students, and qualitative reports of opinion add considerable depth and range, as compared to typical polls of student opinions.

Duration: Spring 1969-continuing.

Publications: (1) Teen-agers discuss the "generation gap." *Youth Reports No. 1,* U. S. Department of Health, Education, and Welfare, 1969. (2) Youth reporters discuss "problem drugs." *Youth Reports No. 2,* U. S. Department of Health, Education, and Welfare, 1970. (3) Youth reporters discuss legal age restrictions. *Youth Reports No. 3,* U. S. Department of Health, Education, and Welfare, 1971.

35-AA-11 NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS (NAEP)

Investigator(s): J. Stanley Ahmann, Ph.D., Project Director; Roy Forbes, Ed.D., Project Director; and George Johnson, Ph.D., Associate Project Director, National Assessment of Educational Progress, Education Commission of the States, 700 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80203.

Purpose: To obtain census-like data on the knowledge, skills, concepts, understandings, and attitudes possessed by young Americans; and to measure the growth or decline in educational attainments that occur over time in the 10 learning areas assessed.

Subjects: 27,000 subjects annually in each age group: 9, 13, and 17 (including high school dropouts and early graduates); and 5,000 young adults annually, ages 26 to 35.

Methods: The National Assessment of Educational Progress is an annual national survey that assesses 10 learning areas: art, career and occupational development, citizenship, literature, mathematics, music, reading, science, social studies, and writing. Three areas have been assessed twice: science (1969-70 and 1972-73); writing (1969-70 and 1973-74); and reading (1970-71 and 1974-75). The four age levels assessed were selected to correspond to the end of primary, intermediate, secondary, and postsecondary education. A national probability sample of approximately 2,500 to 2,600 individuals per group administered package, and 2,100 to 2,200 individuals per individually administered package are assessed annually. The samples are designed to allow NAEP to estimate the performance of the population for that age level.

Students in school are assessed in small groups up to 12, or in some cases, in individual interviews. Paper and pencil questions, discussions, and actual tasks to perform are included among the exercises. Adults are interviewed individually at home, and 17-year olds who are out of school also respond to exercises individually. Results are reported for about 50 percent of the exercises given each year and are stated in percentages of people responding correctly or incorrectly. Results are reported nationally and for geographic region, size and type of community, age, sex, race, and parental education.

Duration: 1969-continuing.

Cooperating group(s): National Center for Educational Statistics, Office of Education, Education Division, U. S. Department of Health, Education, and Welfare; Carnegie Corporation; Ford Foundation's Fund for the Advancement of Education; Research Triangle Institute; Measurement Research Center; Education Commission of the States.

Publications: The National Assessment Publications List is available from Education Commission of the States, 300 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80203.

35-AA-12 COLLABORATIVE STUDIES IN CEREBRAL PALSY AND OTHER NEUROLOGICAL AND SENSORY DISORDERS OF INFANCY AND CHILDHOOD

Investigator(s): Joseph S. Drage, M.D., National Institute of Neurological and Communicative Disorders and Stroke, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.

Purpose: The Collaborative Perinatal Project (CPP) is a longitudinal multidisciplinary research effort which seeks leads to the etiologies of cerebral palsy, mental retardation, learning disorders, congenital malformations, minimal brain dysfunction, convulsive disorders, and communicative disorders through studies which relate the events, conditions, and abnormalities of pregnancy, labor, and delivery to the neurological and mental development of the children of these pregnancies.

Subjects: During a period from 1959 through 1966, detailed research data were obtained from 50,000 women during pregnancy, labor, and delivery. The children born to these 50,000 women during their participation in the CPP have been examined at specific intervals up to the child's eighth birthday to identify abnormal conditions which might limit the child's ability to reach maximum developmental potential.

Methods: A comprehensive analysis of the data will investigate the complex interactions between the child's condition and the antecedent factors which may have contributed to the condition. The analysis of this data is underway within the National Institutes of Health, within other government agencies, and under contract with teams of investigators at medical centers outside of government. The Perinatal Research Branch and the National Institute of Neurological and Communicative Disorders and Stroke have the responsibility for monitoring, coordinating, and administering the overall research effort. The goal of this effort is to make a series of publications available to the research community and the general public. The projected completion of this analysis is June 30, 1976. The data for the CPP were collected at 12 major medical centers in the United States.

Duration: 1956-continuing.

Cooperating group(s): Charity Hospital, New Orleans, Louisiana; Johns Hopkins University School of Medicine, Baltimore, Maryland; Boston Lying-In Hospital, Children's Medical Center, and Harvard University (Warren Anatomical Museum), Boston, Massachusetts; University of Minnesota Medical School, Minneapolis, Minnesota; Columbia-Presbyterian Medical Center, New York, New York; Children's Hospital of Buffalo, Buffalo, New York; University of Oregon Medical School, Portland, Oregon; Children's Hospital of Philadelphia

and Pennsylvania Hospital, Philadelphia, Pennsylvania; Brown University, Providence, Rhode Island; University of Tennessee Medical School, Memphis, Tennessee; Medical College of Virginia, Richmond, Virginia.

Publications: (1) Niswander, K. R. *et al. The women and their pregnancies,* 1972. (The Collaborative Perinatal Study of the National Institute of Neurological and Communicative Disorders and Stroke). Available from: Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. Order Stock No. 1749-00038; Price, $10.00. (2) A bibliography is available from the investigator.

35-AA-13 STUDY OF PERSONALITY ORIENTED DEVELOPMENT BY THE TWIN INTRAPAIR COMPARISON METHOD

Investigator(s): William Pollin, M.D., Chief; Donald Cohen, M.D., Clinical Associate; and Eleanor Dibble, Research Social Worker, Section on Twin and Sibling Studies, Adult Psychiatry Branch, National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare, Bethesda, Maryland 20014.

Purpose: To understand the contributions of genetic, constitutional, and environmental factors to social, emotional, and cognitive development during the first years of life; specifically, to explicate the factors that underlie the emergence of individuality, using twins and triplets as subjects.

Subjects: Twins and triplets, from the prenatal period through elementary school age.

Methods: The central methodological principle emphasizes the effort to define precisely developmental difference within infant and childhood MZ twin pairs, and then search for the determinants of such differences. In the longitudinal study, parents are interviewed as soon as the diagnosis of a twin pregnancy is made. Neurological, pediatric, and developmental assessments are performed at birth and at 3- to 6-month intervals during the first years of life. The parents are interviewed at the same intervals about the children's development and family history. In the preschool period, the children receive standardized psychological testing, are observed in a standardized nursery school setting, and are administered projective psychological testing. Children and families are visited at home and also seen in structured office settings. In cross-sectional studies, children are seen for developmental evaluation, psychological assessment, and observations of free play; and their parents are interviewed. The value of questionnaire techniques is being investigated. A general research question relates to the way in which constitutional differences in the children elicit different types of parenting, and the ways in which differential parental behavior shapes the emergence of personality differences in children.

Duration: 1967-1980.

35-AA-14 PREVENTIVELY ORIENTED SCHOOL MENTAL HEALTH PROGRAMS

Investigator(s): Emory L. Cowen, Ph.D., Professor, Department of Psychology, and Director, Primary Mental Health Project; D. A. Dorr, Ph.D., Research Coordinator; L. D. Izzo, M.A., Chief Psychologist; and M. A. Trost, M.A., Chief Social Worker, Primary Mental Health Project, University of Rochester, River Campus Station, Rochester, New York 14627.

Purpose: To detect and prevent school maladaptation.

Subjects: 7,500 school children including 4,500 primary children in 11 preventively oriented school mental health programs.

Methods: Current research, which originated in 1958 (see *Research Relating to Children, Bulletin 19,* January-September 1965, Study 19-SS-7, p. 214), includes 23 studies on training nonprofessionals, evaluation of programs, process analyses, selection-process relations, selection-outcome relations, and process-outcome relations. Between 20 and 30 different research instruments and assessment procedures are being used.
Duration: 1958-continuing.

35-AA-15 LANGUAGE ACQUISITION IN THE CONTEXT OF THE DEVELOPMENT OF BEHAVIOR AND INTERACTION

Investigator(s): Margaret Bullowa, M.D., Researcher, Speech Communication Group, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.
Purpose: To find the steps by which early stages of the child's language development take place.
Subjects: Four firstborn children from white, English-speaking, middle class families.
Methods: Each child was observed from birth for at least 30 months at home at weekly intervals. On each visit a half hour continuous record was made on tape and film. An observer using a shielded microphone dictated a simultaneous description of ongoing behavior and interaction to supplement the film taken by a robot camera. A timing signal was placed on the tape and film every 5 seconds. (The tape and film from an observation may be synchronized during playback in the laboratory.) In addition, an independent team that consisted of a pediatrician and a developmental psychologist visited each baby's home once a month to assess other aspects of maturation and development. Indexes to sound and transcripts were made from the tapes to permit rapid search. Tapes are analyzed by linguists interested in phonological, semantic and syntactic features. Synchronized tape and film is studied by linguists and by the principal investigator, who is interested in the communicative behavior of which the vocalization forms a part.
Findings: The most significant finding is the apparent obligatory relationship between the child's vocal sound production and actions with the same meaning in early *performative sentences.* Such sentences are used by the child to communicate messages when he is showing something to someone, when he is greeting someone, etc. Another finding is the spontaneous appearance of sentences with topic-comment construction in the child's speech even though parents rarely use this construction. (The construction is not characteristic of adult American English.)
Duration: Pilot study, 1959-1965; present study, 1965-continuing.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: *Journal of Child Psychiatry,* 1964, III(1), 53; *Monographs of the Society for Research in Child Development,* 1964, 29(1), 101-114; *Language and Speech,* 1964, 7(2), 107-111; *Quarterly Progress Report of the Research Laboratory of Electronics,* 1966, 81, 181-186; *Lingua,* 1967, 19(1), 1-59; *Foundations of Language,* 1967, 1, 37-65; Reibel, D. A. and Schane, S. A. (Eds.) *Modern studies in English.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969. Pp. 422-447; Bar-Adon, A. and Leopold, W. F. (Eds.) *Child language: A book of readings.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971; *Journal of the American Academy of Child Psychiatry,* 1971, 10(1), 124-135; *Quarterly Progress Report of the Research Laboratory of Electronics,* M.I.T., 1971, No. 100.

35-AA-16 THE HARVARD PRESCHOOL PROJECT

Investigator(s): Burton L. White, Ph.D., Director; Jean Watts, Ph.D., Co-director; and Barbara Kaban, M.A., The Harvard Preschool Project, Laboratory of Human Development, Graduate School of Education, Harvard University, 418 Larsen Hall, Appian Way, Cambridge, Massachusetts 02138.

Purpose: To trace the development of educability and competence in children during the first 6 years of life, and simultaneously to trace the role of experience in such development.

Subjects: Presently, 32 normal children, ages 12 to 32 months, of both sexes, half of whom were selected because they exhibited potentials to develop high degrees of general competence during the second and third years of life; while the other children seemed likely to develop a considerably lower level of competence.

Methods: The work in progress constitutes a longitudinal natural experiment. Data are collected by home observation and testing of the children on the average of 2 hours per week. One observational technique consists of tape recordings in which the observer describes the child's activities. The data are then coded onto forms using instruments developed for the project. Another technique involves a checklist record of behavior. Tests of language and cognitive development are administered regularly. Factors, including stream of experience, the child's competencies, and salient environmental influences, are measured.

Findings: Analysis of preliminary data indicates that the observation instruments are monitoring the development of competence in promising ways. Further indications of how child-rearing practices influence the process are becoming clear. The mother or substitute, usually through indirect action, is seen as the major environmental influence on the development of competence. A longitudinal experiment will be initiated this year. (See *Research Relating to Children, Bulletin 22,* May-December 1967, Study 22-DA-3, p. 16.)

Duration: September 1965-continuing.

Cooperating group(s): U. S. Office of Economic Opportunity; Carnegie Corporation, New York; Head Start, Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.

35-AA-17 LEARNING OF INCENTIVE VALUE IN CHILDREN

Investigator(s): Jum C. Nunnally, Ph.D., Professor, Department of Psychology, Vanderbilt University, Nashville, Tennessee 37203.

Purpose: To study the learning of incentive value in children through the use of reward conditioning.

Subjects: Elementary school children, ages 7 to 11.

Methods: Neutral objects (usually nonsense syllables) are associated with receipt of reward, nonreward, and loss of reward in various types of research designs. The amounts and kinds of condition reward value are measured in relation to verbal evaluation, reward expectancy, choice behavior, and measures of selective attention.

Findings: Various consistent effects have been found on the dependent measures, and the research paradigms have been able to differentiate many treatment conditions concerned with secondary rewards.

Duration: 1963-continuing.

Cooperating group(s): Office of Education, Education Division, U. S. Department of Health, Education, and Welfare.

Publications: Rileigh, K. K. and Nunnally, J. C. A new measure of semantic appraisal for studies of secondary rewards. *Psychonomic Science,* 1970, 18, 203-205; Wilson, W. H. and Nunnally, J. C. A naturalistic investigation of acquired meaning in children. *Psychonomic Science,* 1971, 23, 149-150.

35-AA-18 CHILDHOOD PSYCHOSIS

Investigator(s): Rudolf Ekstein, Ph.D., Director, Childhood Psychosis Project; Seymour W. Friedman, M.D., Director, Clinical Services; Peter Landres, M.D., Staff Psychiatrist; Beatrice M. Cooper, M.A., Senior Research Social Worker; and Joel Liebowitz, Ph.D., Clinical Research Psychologist, Reiss-Davis Study Center, 9760 West Pico Boulevard, Los Angeles, California 90035.

Purpose: To develop better diagnostic and treatment methods for childhood psychosis; and to investigate psychoanalytic methods of treatment, the use of support systems, and work with parents, collaborating agencies, schools, and hospitals.

Subjects: 10 children, ages 5 to 20.

Methods: Data were gathered through tape recordings of psychotherapy sessions, therapists' summaries of sessions, and repeated psychological tests. The use of *distance* as a psychological mechanism will be investigated. (See *Research Relating to Children, Bulletin 18,* March-December 1964, Study 18-L-36, p. 58; and *Bulletin 20,* October 1965-May 1966, Study 20-IA-1, p. 72.)

Duration: 1957-continuing.

Publications: *Children of time and space, of action and impulse.* New York: Appleton-Century-Crofts, 1966; *The challenge: Despair and hope in the conquest of inner space.* New York: Brunner/Mazel, 1971; Ekstein, R. and Friedman, S. W. Do you have faith that I'll make it? *Reiss-Davis Clinic Bulletin,* 1971, 8(2); Rubin, K. The flawed hammer. *Reiss-Davis Clinic Bulletin,* 1971, 8(2); Cooper, B. The flawed triangle. *Reiss-Davis Clinic Bulletin,* 1971, 8(2); Liebowitz, J. M. Transformation of the flaw — Re-evaluation via psychological testing. *Reiss-Davis Clinic Bulletin,* 1971, 8(2); Ekstein, R. and Wax, D. Fusion and diffusion of memory and perception in childhood psychosis in relation to psychotherapeutic innovations. *Reiss-Davis Clinic Bulletin,* 1972, 9(2); Ekstein, R.; Friedman, S.; and Caruth, E. The psychoanalytic treatment of childhood schizophrenia. In B. B. Wolman (Ed.), *Manual of child psychopathology.* New York: McGraw Hill, 1972. Pp. 1035-1057.

35-AA-19 A SURVEY OF THE NUTRITIONAL STATUS OF BRITISH SCHOOL CHILDREN

Investigator(s): Judith Cook, M.B., B.Chem., Lecturer; Douglas Altman, B.Sc., Lecturer; W. W. Holland, M.D., F.F.C.M., Professor; and S. G. Topp, B.Sc., Dip.Stat., Lecturer, Department of Clinical Epidemiology and Social Medicine, School of Medicine, St. Thomas' Hospital, London, S.E.1, England; and A. Elliott, M.D., D.P.H., County Medical Officer, Kent County Council, Kent, England.

Purpose: To examine the dietary intake of school children and investigate its relationship to health and socioeconomic factors; and to explore the extent and nature of poor nutrition.

Subjects: 1,017 children, born between 1953 and 1955 or between 1958 and 1960, residing in and attending Local Authority schools in four areas in Kent, England. The sample was stratified by social class, family size, and weight. Higher sampling fractions were taken for children from four groups: children (1) from larger families, (2) from lower social classes, (3) with no fathers, and (4) with low weights; in order to have adequate numbers of subjects in those groups suspected of having the greatest likelihood of deficiency.

Methods: Field work for each child, conducted between September 1968 and March 1970, was comprised of a weighted diet record, a socioeconomic questionnaire, and a medical examination. The weighted diet record was kept for 1 week and was closely supervised by a trained field worker. The same field worker administered the socioeconomic questionnaire which elicited information on family structure, father's occupation, mother's education and working status, the child's health history and eating pattern, and the parents' heights. The medical examination, carried out by one of two medical officers, included a clinical assessment of the

nutritional status of the child; measurements of height, weight, triceps and subscapular skinfold thickness, arm circumference, and peak expiratory flow rate. The medical examination also noted clinical evidence of vitamin deficiency.

Duration: 1968-continuing.

Cooperating group(s): Department of Health and Social Security.

Publications: (1) Cook, J. *et al.* A survey of the nutritional status of school children. Relation between nutrient intake and socioeconomic factors. *British Journal of Preventive Social Medicine,* 1973, 27, 91-99. (2) Topp, S. G.; Cook, J.; and Elliot, A. Measurement of nutritional intake among school children. *British Journal of Preventive Social Medicine,* 1972, 26, 106.

35-AA-20 RESEARCH AND GUIDANCE LABORATORY SUPERIOR STUDENT PROJECT

Investigator(s): Marshall P. Sanborn, Ph.D., Director; and Charles Pulvino, Ph.D., Associate Director, Research and Guidance Laboratory, University of Wisconsin, 1025 West Johnson, Madison, Wisconsin 53706.

Purpose: To develop and demonstrate procedures for the identification and description of multipotential and promising youth; to study the guidance and educational development of human potential; and to serve as a demonstration and development center for counseling, guidance, and planning activities for all cooperating high schools.

Subjects: This is a longitudinal sample now numbering 3,700 males and females, ages 14 to 30, from 90 Wisconsin school systems, whose average mental test scores are in the upper three to five percent of students in their age range and grade in school. Subjects are selected using criteria designed to identify multipotential youth in grade 9. These criteria include aspects of the student's vocabulary, spoken and written communication, reading background, range of interests, school performance, creativity, and learning behavior.

Methods: Subjects visit the laboratory facilities for 1 day at least once during their period of high school attendance. Arranged activities include testing and evaluation, analysis of written and oral performances, visits to classes and laboratories, and conferences with university staff members in any area of interest. These activities are designed to (1) broaden students' horizons with respect to educational and vocational opportunities, (2) develop realistic self-concepts about their own strengths and interests, (3) foster plans for suitable educational programs, (4) discover methods for overcoming limitations, (5) encourage development of personal and academic strengths, and (6) provide counsel on matters that may influence the individual student's fullest development. Findings are interpreted and implications are considered with the student in individual counseling sessions. Laboratory staff teams (1) visit students' schools and hold conferences with the parents of each participating child to inform parents about characteristics of their children which they may not know; (2) stimulate action of parents to meet their child's developmental needs; (3) facilitate communication between the parents, school, and student; and (4) discover points of view and other parental characteristics which affect the student's development. A written report regarding each individual student is sent to his or her school containing information about the student's performance, interests, and needs, as well as suggestions the school could implement to provide desired educational or personal experiences. Inservice training sessions are held to discuss specific students, suggestions to the school, and general principles for guidance and education for superior students. Objectives of these training sessions are (1) stimulation of and assistance with the processes of identification of superior students; (2) encouragement and assistance in making special provision for the development of superior students, and stimulation to do so for other students; (3) provision of information about educational and vocational requirements and opportunities particularly applicable to superior students; (4) encouragement of innovation and experimentation in school procedures for superior students as well as for other students; and (5) demonstration of ap-

propriate guidance services for high school students. Although there are difficulties in obtaining adequate control groups, some research studies have been done comparing laboratory participants with other students matched on academic, familial, school, and community variables. In addition, comparisons of the effectiveness of two or more procedures for accomplishing a particular guidance goal have been made in other laboratory research studies.
Findings: The Research and Guidance Laboratory is a cooperative effort which has maintained direct, personal, longitudinal, and functional relationships between the University of Wisconsin and 3,700 top students, their parents, and their teachers throughout Wisconsin. (See *Research Relating to Children, Bulletin 22,* May-December 1967, Study 22-QA-1, p. 83.) More than 97 percent of all student participants who have graduated from high school have enrolled in higher education programs. Many have gone on to graduate and professional study. As a group, these young people have established a very outstanding record in college.
Duration: 1957-continuing.
Cooperating group(s): Office of Education, Education Division, U. S. Department of Health, Education, and Welfare; 90 cooperating school systems in Wisconsin.
Publications: (1) Sanborn, P. and Niemiec, C. J. Identifying values of superior high school students. *School Counselor,* March 1971. (2) Bradley, R. W. and Sanborn, M. P. Ordinal position of high school students identified by their teachers as superior. *Journal of Educational Psychology,* 1969, 60(1), 41-45. (3) Mowsesian, R., Heath, R. G.; and Rothney, J. W. M. Superior students' occupational preferences and their fathers' occupations. *Personnel and Guidance Journal,* November 1966. Refer to *Education Index* for other publications related to this project.

35-AA-21 NATIONAL CHILD DEVELOPMENT STUDY

Investigator(s): V. R. Fogelman, Senior Research Officer, National Children's Bureau, 8 Wakeley Street, Islington, London E.C.1., England.
Purpose: To conduct a multidisciplinary, longitudinal study of a representative sample of British children to chart their physical, educational, and social development from birth to maturity.
Subjects: Approximately 16,000 children comprising all the children in England, Scotland, and Wales born during the week of March 3-9, 1958.
Methods: Medical and social background information was collected at birth by questionnaires through hospitals and midwives. Follow ups are conducted at ages 7, 11, and 16 consisting of a medical examination, a questionnaire completed by the subject's school, tests of attainment, and a home interview with the parents. At ages 11 and 16 only, questionnaires are completed by the subjects. In addition, special studies of subsamples are being performed. These usually involve further questionnaires and/or interviews. Some of the substudies focus on children in one-parent families, and adopted, illegitimate, mentally handicapped, physically handicapped, socially disadvantaged, and gifted children.
Duration: 1958-1977.
Cooperating group(s): Association of Directors of Education, Scotland; Department of Education and Science; Department of Health and Social Security; Institute of Child Health, University of London; National Birthday Trust Fund; National Foundation for Educational Research; Society of Education Officers; Society of Community Medicine.

GROWTH AND DEVELOPMENT

Physical

35-CA-1 INCIDENCE OF CONGENITAL MALFORMATIONS IN INFANTS OF TEEN-AGE MOTHERS

Investigator(s): Norman Kendall, M.D., Professor, Department of Pediatrics; and David Goodner, M.D., Assistant Professor, Department of Obstetrics and Gynecology, Temple University Hospital, 3401 North Broad Street, Philadelphia, Pennsylvania 19140.
Purpose: To determine the incidence of congenital malformations in infants of teen-age mothers.
Subjects: 1,000 infants of teen-age mothers.
Methods: Data were collected on infants delivered at Temple University Hospital over a 4½-year period. The incidence of malformations in infants born to mothers in four age groups were compared: (1) under 17 years, (2) 17 to 19 years, (3) 20 to 35 years, and (4) over 35 years.
Findings: There appears to be an increase of congenital malformations in infants born to mothers under 17 and over 35 years of age.
Duration: June 1970-completed.

35-CA-2 ADOLESCENT HEALTH IN HARLEM: A FOLLOW-UP STUDY

Investigator(s): Ann F. Brunswick, M.A., Senior Research Associate, School of Public Health, Columbia University, 630 West 168th Street, New York, New York 10032.
Purpose: To determine the health and life outcomes of a representative sample of Harlem youths who were studied 5 years previously.
Subjects: 141 Harlem adolescents who were ages 16 and 17 when studied in 1969-1970.
Methods: In the original study, the subjects' health was studied extensively through personal interviews and medical examinations. For the follow up, personal interviews were conducted in subjects' homes. Interviews covered repeated measures of health status, specific health problems, utilization of health services, plus detailed measures on educational, occupational, family life, and drug dependency outcomes.
Duration: July 1974-December 1975.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-CB-1 ECOLOGY OF MALNUTRITION

Investigator(s): Ernesto Pollitt, Ph.D., Department of Food Science, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139.

Purpose: To assess the social-environmental factors related to growth retardation among young children who are apparently free of an underlying disease.
Subjects: 38 boys and girls, outpatients at a local hospital, ages 14 months to 5 years. The 19 experimental and 19 control group subjects were matched for age, sex, and skin color, but not for height and weight.
Methods: An *ex post facto* design was used to identify possible direct and indirect causal factors relating to experimental and control group children with contrasting body sizes. Data were collected during home visits by public health nurses and were analyzed using t-tests, chi-squares, and stepwise multiple regression.
Findings: Compared to the control group, the experimental group had a lower birthweight, calorie intake, and socioeconomic status. The experimental group also had more feeding difficulties in their first year of life, less physical and verbal interaction with their mother, and their mothers had less child care help.
Duration: January 1972-December 1975.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; Carnegie Corporation; Stern Fund; Grant Foundation, Ross Laboratories.
Publications: (1) Pollitt, E.; Eichler, A.; and Chan, C. K. Psychosocial development and behavior of mothers of failure-to-thrive children. *American Journal of Orthopsychiatry* (in press). (2) Pollitt, E. and Eichler, A. Behavioral disturbances among failure-to-thrive children. *American Journal of Diseases of Children* (in press).

35-CC-1 A COMPARATIVE STUDY OF MIDDLE EAR ABNORMALITIES

Investigator(s): Ross M. Weaver, Ph.D., Director, Clinical Audiology, Communicative Disorders Area, Department of Educational Psychology, Brigham Young University, F-378 Harris Fine Arts Center, Provo, Utah 84602; Prince L. Watkins, M.C.H., Clinical Audiologist, Northeast Mississippi Lions Hearing Program, P. O. Box 413, Tupelo, Mississippi 38801; and Robert A. Arbon, M.D., Otolaryngologist, 777 North Fifth Street, West, Provo, Utah 84601.
Purpose: To determine the relative efficacy with which certain middle ear pathologies can be identified by each of two impedance measuring devices or by otoscopic evaluation by an otolaryngologist.
Subjects: 34 male and 26 female mentally retarded residents of the Utah State Training School, ages 5 to 55.
Methods: Subjects were identified as having possible middle ear problems based on a screening with Peters AP61 Z Bridge. All subjects were then given otological examinations and were retested with the Peters Z Bridge and a Grason-Stadler Model 1720 Otoadmittance meter. Middle ear anomalies were classified under eight types or conditions following Jerger's system of identifying characteristic tympanogram configurations. Differences in three methods of identifying middle ear pathologies were analyzed by chi-squares.
Findings: Significant differences were found in the three measures of identification. Identification of otosclerosis, perforations of the TM, and thin TM or ossicular chain disarticulation showed remarkable agreement among the three measures. There was poor agreement in identifying pathologies further away from the TM, such as eustachian tube malfunction, which the otolaryngologist usually missed. Scarred membranes and discoloration of the TM were readily identified by the otolaryngologist, but missed by both bridges when using the 220 or 275 HZ probe tone. While using the 660 HZ probe tone, the Grason-Stadler otoadmittance meter was the most sensitive identifier of a thin TM.
Duration: February 1974-August 1975.

Cooperating group(s): Utah State Training School, American Fork, Utah; Brigham Young University, Research Division Grant.
Publications: Information about the study is available from Dr. Weaver.

35-CC-2 VISUAL PERCEPTUAL DEVELOPMENT IN INFANCY

Investigator(s): Louise Hainline Donnee, Ph.D., Assistant Professor, Department of Psychology, Brooklyn College, Brooklyn, New York 11210.
Purpose: To investigate various aspects of infants' visual behavior in the first half year of life, including studying the physical characteristics of visual stimuli which influence visual behavior, the development of peripheral vision, the development of form perception, and the development of early social response; and over the long term, to build an understanding of how the infant develops and uses a stable and reliable cognitive model of his or her world.
Subjects: Infant boys and girls, ages 4 to 6 weeks and 6 months.
Methods: Infrared corneal reflection photography is used. This technique allows a detailed record to be taken of where an infant fixates on a visual stimulus during scanning. Eye movement data are supplemented by data on heart rate changes, pupil diameter changes, and in some cases, sucking. This research may be significant because it may (1) yield data on the dimensions in the environment that are the basis of infant visual response; (2) allow for the study of how the infant organizes his or her perceptions into higher order structures; (3) relate to the visual mechanisms mediating social development in early infancy; (4) provide the basis for a new tool to assess intellectual and developmental functioning in infancy; (5) relate to, and perhaps clarify, existing data on the eye movements of older children and adults; and (6) relate to a period that is critical in the debate on whether perception is learned or innate.
Duration: June 1974-August 1977.
Cooperating group(s): National Science Foundation; National Institute of Child Health and Human Development, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-CC-3 INFANTS' RESPONSES TO VISUALLY PRESENTED OBJECTS

Investigator(s): P. C. Dodwell, D.Phil., Head, Department of Psychology, Queen's University, Kingston, Ontario, Canada.
Purpose: To test Bower's claim that very young infants (7 to 15 days old) make ecologically valid responses (i.e., reaching) to visually presented objects.
Subjects: About 30 normal, male and female babies, ages 3 to 21 days.
Methods: Babies are observed in an alert, nondistressed state. The babies are presented with objects or pictures of objects and are filmed on split screen videos. Reaching, visual fixation, and visual scan are recorded. Each child serves as his own control.
Findings: The investigator concluded that Bower is wrong. Reaching bechavior is highly state dependent and certainly is not correlated with whether objects or pictures are presented.
Duration: September 1973-continuing.
Cooperating group(s): National Research Council of Canada; Department of Pediatrics, Kingston General Hospital.

35-CC-4 THE ROLE OF THE MOTHER IN NEONATAL HEARING SCREENING

Investigator(s): John H. Gaeth, Ph.D., Chairman; Sue Olshansky, B.A., Graduate Student; and David Marcus, B.A., Graduate Student, Department of Audiology, School of Medicine, Wayne State University, 261 Mack Boulevard, Detroit, Michigan 48201.
Purpose: To evaluate the effectiveness of mothers' observations as evidence of normal hearing in newborn infants.
Subjects: 525 consecutive births who were served by one pediatric group.
Methods: Each mother was given an instructive brochure which was included in the material presented to her at the maternity ward. She was also provided with a questionnaire to be brought to her baby's first or second physical examination. A major problem in the conduct of the research was the mechanics of getting the completed questionnaires, so a great deal of time was spent in follow-up activities. Babies were checked to determine their hearing status.
Findings: A total of 506 questionnaires were completed. Of the 506, 98.6 percent reported positive evidences of normal auditory responses during the first 60 days. In a few cases there was clear evidence that the child was not responding, and in some cases the responses were questionable.
Duration: January 1974-June 1975.
Cooperating group(s): Pediatric Associates of Farmington, Farmington, Michigan.

35-CD-1 NEUROPHYSIOLOGICAL INDICES OF MATURATION IN NORMAL AND AUTISTIC CHILDREN

Investigator(s): Peter E. Tanguay, M.D., Director, Clinical Services, MR/Child Psychiatry, Neuropsychiatric Institute, University of California at Los Angeles, 760 Westwood Plaza, Los Angeles, California 90024.
Purpose: To study (1) patterns of eye-movement-burst activity during REM (rapid eye movement) sleep; (2) spindle-wave activity during Stage 2 sleep; and (3) interhemispheric differences in auditory evoked responses in autistic and normal children, ages 2 to 5.
Subjects: Autistic and normal children, ages 2 to 5, matched for age and sex.
Methods: Autistic children are screened using rigorous diagnostic criteria. Electroencephalogram (EEG) recordings are carried out during all-night sleep. The electrophysiological phenomena are examined in terms of changes with maturation and in terms of differences between normal and autistic subjects.
Findings: Autistics show very immature eye-movement-burst patterns and normal sleep-spindle activity, but fail to show interhemispheric asymmetry in AER characteristics.
Duration: July 1970-July 1975.

35-CE-1 TREATMENT OF INFANT RICKETS

Investigator(s): J. C. Peterson, M.D., Professor; and Elaine Kohler, M.D., Assistant Professor, Department of Pediatrics, Medical College of Wisconsin, 561 North 15th Street, Milwaukee, Wisconsin 53233.
Purpose: To study the use of 25 hydroxy cholecalciferol in treating various forms of infant rickets.
Subjects: Children with various forms of rickets, including vitamin D dependency, hypophosphatemic, renal, and hepatic forms, studied from infancy through adolescence.

Methods: An intermediary metabolic product in vitamin D_3 metabolism, 25 hydroxy cholecalciferol is active without hepatic intervention and is substituted for vitamin D_3 in treating the subjects. The effectiveness of the vitamin D form is evaluated by long-term follow-up of the subjects' responses to various levels of treatment.
Findings: On the basis of preliminary analysis, 25 hydroxy cholecalciferol seems effective in hepatic forms.
Duration: 1974-1978.
Cooperating group(s): Upjohn Company; Milwaukee Children's Hospital.

35-CE-2 PROVIDING AN EMPIRICAL BASIS FOR CHILD NUTRITION COUNSELING

Investigator(s): Todd R. Risley, Ph.D., Professor, Department of Human Development, Bureau of Child Research, University of Kansas, Lawrence, Kansas 66045.
Purpose: To improve nutrition counseling for caregivers of young children by empirically identifying factors affecting children's food consumption.
Subjects: 20 boys and girls, ages 1 to 3, attending a day care center and representing a cross-section of socioeconomic and ethnic backgrounds.
Methods: Subjects' food acceptance is quantified by weighing the amounts of food actually eaten and making objective observations of subjects' behavior at meals. Items selected for testing emphasize preventive diets and future food economics as well as the nutrients often lacking in children's diets. Equivalent time samples designs are used to assess the function of particular characteristics of foods and social influence on children's food consumption.
Findings: Preliminary results indicate that toddlers (1) have no preference between nonfat dry, two percent, or whole milk; (2) accept as much canned juice and nonfat dry milk at room temperature as when chilled; (3) eat equal quantities of main dishes and vegetables when served at room temperature and when warmed; (4) eat more of other foods, including milk, when a fruit dessert is not served at lunch; (5) accept main dishes made with flavored textured vegetable protein as well as when the same dishes are made with meat; and (6) eat more softened, steamed vegetables than raw vegetables. The children's acceptance of various beverages seems to be based on sweetness, flavor, color, and texture. Longitudinal data collected weekly suggest that familiarity with foods does not modify acceptance, especially for nonpreferred foods.
Duration: July 1974-July 1977.
Cooperating group(s): Lawrence Day Care Program.

35-CE-3 RELATION OF MATURITY AND NUTRITION IN ADOLESCENCE

Investigator(s): William A. Daniel, Jr., Director, Adolescent Unit, Medical Center, University of Alabama, Birmingham, Alabama 35294.
Purpose: To relate healthy adolescents' maturity ratings to their dietary intake and blood concentrations of several nutrients.
Subjects: 363 adolescent boys and girls, ages 12 to 19, from low income families and 90 girls from upper income families, ages 12 to 19.
Methods: Maturity ratings (Tanner Scale) 1 through 5 were employed. Dietary intake for calories, protein, fat, carbohydrate, calcium, iron, folic acid, vitamin A, ascorbic acid, and cholesterol were obtained by the 24-hour recall method. Blood was examined for hemoglobin, hematocrit, folate, vitamin A, ascorbic acid, carotene, serum iron, and total iron-binding

capacity. These values were correlated with sex, race, and maturity ratings of the subjects. The analysis is presented by means, standard deviations, and projected trends for similar groups of subjects.

Findings: Correlation of dietary intakes and/or concentrations of specific nutrients in the blood are more related to adolescents' maturity than to chronological ages.

Duration: 1972-completed.

Publications: Copies of *Nutrition in Adolescence* are available from the investigator.

35-CE-4 FACTORS AFFECTING DIETARY HABITS OF TEEN-AGE FAMILIES

Investigator(s): Carol I. Waslien, Ph.D., Head, Nutrition and Foods Department, Auburn University, Auburn, Alabama 36830.

Purpose: To evaluate the diet and nutritional status of low income black pregnant teen-agers; and to determine the extent that attitudes and other factors related to behavior patterns may affect food decisions, food buying habits, and food consumption.

Subjects: Experimental group: 25 black pregnant girls, ages 13 to 19; and 25 black pregnant women, ages 20 to 40, participating in the Lowndes County, Alabama Women, Infants, and Children (WIC) Feeding Program. Control group: 25 nonpregnant, black female teens from a similar socioeconomic class.

Methods: Twenty-four hour dietary recalls were evaluated for nutrient intake, based on the recommended daily allowances established by the Food and Nutrition Board of the National Academy of Sciences — National Research Council in 1968. Blood samples were assessed for protein, iron, folacin, ascorbic acid, and retinol levels prior to entry of the pregnant girls and women into the Women, Infants, and Children Program. The WIC Program authorizes money for purchase of food items (such as milk, orange juice, infant cereals, and eggs) by low income pregnant women and low income mothers of children under 4 years old.

Findings: On the basis of partial data collection and analysis, it appears that pregnant teens have lower serum albumin levels than pregnant adults or nonpregnant teens, which suggests that their dietary intake of protein is less adequate. Although there was a great variation in other blood constituents, it appears that serum folacin values are not appreciably different for the three groups.

Duration: June 1974-June 1975.

Cooperating group(s): Lowndes County Health Services Association; Ford Foundation Nutrition Project; U. S. Department of Agriculture.

35-CE-5 IMPROVEMENT OF NUTRITION OF TEEN-AGERS IN SELECTED COUNTIES OF NORTH FLORIDA

Investigator(s): Julein M. Axelson, M.S., Assistant Professor, Division of Consumer Science and Home Economics, Florida A & M University, Box 381, Tallahassee, Florida 32307.

Purpose: To determine the meal patterns and nutrient intakes of teen-agers; and to test the efficiency of a mass media campaign, including a contest, to increase nutrition knowledge of teen-agers.

Subjects: 205 experimental and 195 control ninth graders randomly selected in areas within and without a TV and radio broadcast range. Subjects reside in demographically similar communities.

Methods: The experimental group was interviewed, subjected to a mass media campaign (TV spots, radio announcements, radio contest, and brochure), and interviewed again. The interview included a nutrition quiz. The control group, outside the broadcast area, was interviewed at the same times.
Duration: 1973-1975.
Cooperating group(s): U. S. Department of Agriculture; Cooperative State Research Service.

35-CE-6 THE EFFECT OF INFANT MALNUTRITION ON DEVELOPMENT AND PERFORMANCE OF SELECTED CHILDREN

Investigator(s): Mina W. Lamb, Ph.D., Professor Emeritus, Department of Food and Nutrition, Texas Tech University, Lubbock, Texas 79409.
Purpose: To analyze the progress of children who were well babies in contrast to those who were malnourished when infants.
Subjects: Of 110 children, 65 were identified as malnourished when infants and performed and developed less acceptably than 45 children from the same clinic and from similar socioeconomic and ethnic origins.
Methods: Data on file at the Well-Baby Clinic were recorded at times when the children were checked, and data on the same children were recorded 5 to 10 years later when they were in school. Major emphasis was on physical growth and development, although progress in school was recorded.
Findings: Of 65 malnourished infants, 25 percent developed in normal channels of growth (Wetzel), in contrast to 47 percent of the 45 well babies with similar ratio when based on age. In school performance, 31 percent were average or better when compared to 87 percent for well babies when these children were 8 to 10 years old.
Duration: January 1974-May 1975.
Cooperating group(s): Well-Baby Clinic; Agency of United Way.

35-CF-1 MORPHOLOGY OF THE FACE IN PATIENTS WITH LATERAL FACIAL DYSPLASIA (LFD): UNILATERAL AND BILATERAL FORMS

Investigator(s): R. B. Ross, M.D., Department of Dentistry, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario M5G 1X8, Canada.
Purpose: To contribute to the morphology of lateral facial dysplasia (LFD) syndrome using surface measurements.
Subjects: 72 patients, 38 boys and 34 girls, ages 4 to 18.
Methods: Thirty-three surface measurements and 15 qualitative signs of the face were registered in each patient. The West Germany healthy population was used as the control group. ±2 SD from the normal mean values were regarded as abnormal measurements.
Findings: The study demonstrated that the so-called "normal" side of the face of patients with unilateral LFD could also be damaged but to a lesser degree. In bilateral LFD, a balanced distribution of defects on both sides of the face was seen in one-third of the patients. In the other two-thirds, the face was markedly more damaged on one side. Although the division of lateral facial dysplasias to unilateral and bilateral forms seems to be justified from clinical and genetical points of view, morphology on the face in both types of LFD was not dissimilar and exhibited only quantitative, not qualitative differences.

Duration: 1973-1975.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-CG-1 SOCIAL BIOLOGY OF PREGNANCY OUTCOME: EPIDEMIOLOGY OF ABNORMAL FETAL DEVELOPMENT

Investigator(s): Irvin Emanuel, M.D., Professor and Director; Lowell E. Sever, Ph.D., Acting Assistant Professor; and Richard H. Ward, Ph.D., Assistant Professor, Child Development Mental Retardation Center WJ-10, University of Washington, Seattle, Washington 98195.
Purpose: To evaluate the sociobiological characteristics of mothers who have children with central nervous system malformations compared with control women, in order to test the hypothesis that maternal growth retardation is important in the etiology of central nervous system malformations.
Subjects: 250 mothers of children with spina bifida or anencephalus; and 600 control group mothers who are sisters or friends of the experimental group women.
Methods: This study involves a case control, or retrospective, epidemiologic approach. Mothers of affected children are compared to control group women who have borne normal children. Procedures involved include standardized interviews covering information on terminal stature, birthweight, menarcheal age, severe childhood illness, and historical data relating to childhood nutritional, economic, and social deprivation. Subjects' mothers will be asked to provide additional information.
Duration: 1972-1975.
Cooperating group(s): University of Washington Central Laboratory for Embryology, University Hospital, and Children's Orthopedic and Medical Center; Washington State Department of Social and Health Services; University of Oregon Crippled Children's Division; Oregon State Health Department.

35-CH-1 LONGITUDINAL STUDY: ONSET OF PHONOLOGY

Investigator(s): Lisa Menn, M.A., Research Affiliate, Speech Communications Group, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139; and Howard S. Maclay, Ph.D., Professor, Institute of Communications Research, University of Illinois 222c Armory, Urbana, Illinois 61801.
Purpose: To study a child's original phonological rules.
Subjects: 1 boy, studied from ages 1.0 to 1.7.
Methods: The subject was under intensive observation for 20 hours a week, including 8 hours of audiotaping. To maximize the naturalness of their interactions, the observer babysat for the child. Observations were comprised of informal descriptions of behavior, phonetic transcriptions of the child's speech, and records of adult speech to the subject. Phonology and intonation contour were primary areas of interest. For 2 hours a month the child was videotaped and took Piagetian psychological tests. In addition to the investigator's analysis, speech spectograms and computer analysis will be used.
Findings: Results indicate the existence of a prephonemic stage of speech.
Duration: September 1974-May 1975.
Cooperating group(s): National Science Foundation.

35-CH-2 GENERATIVE STUDIES OF THE SOUNDS SYSTEMS OF CHILDREN

Investigator(s): Arthur J. Compton, Ph.D., Research Speech and Language Pathologist, San Francisco Hearing and Speech Center, 2340 Clay Street, San Francisco, California 94115.
Purpose: To study the normal acquisition of phonology of young children; and to investigate the clinical applications of generative-phonological analyses for planning therapy.
Subjects: Study I: Six normal children studied from age 11 months through 5 years. Study II: 25 children, ages 5 and 6, with severe phonological disorders.
Methods: Approximately 21,000 longitudinal samples of children's speech were analyzed.
Findings: Study I: Preliminary results indicate that children learn (1) specific attributes of speech sounds sequentially; and (2) implicit rules, which operate upon these attributes (classes of sounds) in particular phonetic environments, result in highly systematic patterns of sound usage. The wide variations in children's rate of phonological development from child to child, begin to converge with the onset of multiple word utterances at about age 2, which appears to mark a major turning point in the process of general language development. Study II shows that deviant speech also follows very regular patterns comprising a highly organized system. About 30 major types of frequently occurring, deviant patterns of sound substitutions and omissions appear to be typical of children with phonological disorders, and these types correspond closely with those present at various stages of normal development. The child with deviant speech typically has one or two idiosyncratic patterns without parallel in normal development. These patterns appear to disrupt overall intelligibility more than the common patterns. Studies of the clinical applications of phonological analyses clearly demonstrate that by focusing therapy upon a child's deviant patterns (i.e., by working with specific key sounds having the greatest impact upon the organizational structure of the deviant speech system), therapy effects will be maximized.
Duration: September 1972-August 1975.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: (1) Compton, A. J. Generative studies of children's phonological disorders: A strategy of therapy. In S. Singh (Ed.), *Measurements in hearing, speech, and language.* Baltimore, Maryland: University Park Press, 1975. (2) Compton, A. J. Generative studies of children's phonological disorders: Clinical ramifications. In D. Morehead and A. Morehead (Eds.), *Child language pathology: Selected readings.* Baltimore, Maryland: University Park Press, 1975.

35-CH-3 THE UTILIZATION OF TIME-OUT PROCEDURES BY PARENTS TO REDUCE INAPPROPRIATE SPEECH

Investigator(s): Judy K. Wilcox, B.S., Manager, Residential Program; Buell E. Goocher, Ph.D., Director; and David N. Grove, Ph.D., Consultant, Edgefield Lodge, Inc., 2408 S. W. Halsey, Troutdale, Oregon 97060.
Purpose: To investigate (1) consequence characteristics of verbal attention and time-out in modifying inappropriate speech, (2) generalization to nontreated environments, and (3) the enduring effects of treatment.
Subjects: Two mentally retarded boys, ages 7½ and 8½, with behavior problems.
Methods: Single subject design with differential reinforcement of other behavior (DRO) was used to suggest causality. Data were collected using free operant observation instruments with multiple observers and reliability checks. Parents conducted all treatment sessions.

Findings: The results indicated that parents can be trained to modify specific speech patterns, that this training generalized to untreated settings, and that the training was maintained for a period following treatment.
Duration: 1973-completed.

Intellectual

35-DR-1 EMOTIONAL AND COGNITIVE DEVELOPMENT IN CHILDREN

Investigator(s): Richard L. Kimball, Ph.D., Associate Professor, Department of Teacher Education, California State University, Hayward, California 94542.
Purpose: To develop methods of identifying and evaluating psychological growth and development; to determine the linkages in emotional and cognitive growth; and to test the hypothesis that cognitive development will accelerate if students are grouped according to Piagetian levels of cognitive development.
Subjects: Approximately 1,000 boys and girls, ages 4 to 18, including 300 seventh and ninth grade low achievers.
Methods: Subjects were given Piagetian-type tests and paper and pencil tests, and were interviewed. To examine the effects of Piagetian regrouping on underachievers, three groups of students were chosen and studied: one class of preoperational-concrete transitional students, four classes of concrete thinkers, and one class of concrete-formal transitional thinkers.
Findings: Several tests of formal operations were developed that can be used to diagnose developmental learning, to develop curricula to encourage learning formal thought, and to train teachers in the use and facilitation of formal operations in themselves and other concrete thinkers. Formal thought can be taught to less technologically developed peoples and high school failures, as well as graduate students. The measures of cognitive and affective development were highly correlated. The investigator concluded that cognitive development and emotional development are intimately linked and that most learning difficulties are emotional in nature. The results of regrouping underachievers did not necessarily confirm the stated hypothesis. The high cognitive group changed more rapidly than when mixed with the rest of the group, and the preoperational-concrete transitional students seemed less inhibited by a competitive pecking order. The concrete thinkers, however, performed similarly to their performance in previous classes. The investigator concluded that regrouping does enhance learning, but more likely for classroom affective environment factors than for cognitive reasons.
Duration: 1968-continuing.
Publications: (1) A paper presented at the Fourth Annual Conference on "Piaget and the Helping Professions," at Children's Hospital, Los Angeles, California, February 1974: Kimball, R. L. Some aspects of the role of affective development in cognitive development: Relating formal operations to emotional maturity. (2) A paper presented at the Third Annual Conference on "Piaget and the Helping Professions," at Children's Hospital, Los Angeles, California, 1973: Kimball, R. L. The teaching and understanding of formal operations.

35-DB-2 SOCIAL HANDICAP AND COGNITIVE FUNCTIONING IN PRESCHOOL CHILDREN

Investigator(s): H. L. Williams, B.Ed., Principal Research Officer, National Foundation for Educational Research in England and Wales, The Mere, Upton Park, Slough 2L1 2DQ, Berkshire, England.
Purpose: To provide a clearer specification of the characteristics of preschool disadvantaged children and the relation of these characteristics to cognitive functioning and future school learning; to evaluate compensatory programs of planned sequential activities that emphasize the importance of language as a tool for thinking and that develop the strategies of acquiring information, problem solving, and decision making; and to work directly with children and teachers in nursery schools and develop procedures to assist children in areas of difficulty observed in project testing.
Subjects: 50 advantaged and 50 disadvantaged children, ages 4.4 to 4.7, who attend public and private nursery schools.
Methods: Advantaged and disadvantaged children are compared on measures of learning ability, cognitive style, perceptual and language development, controlling mechanisms, self-concept, and achievement motivation. Instruments include the English Picture Vocabulary Test, Wechsler Preschool and Primary Scale of Intelligence, Preschool Embedded Figures Test, Matching Familiar Figures Test, Draw-a-Line Test, Sigel Object Picture Categorizing Test, Seguin Form Board, Dog and Bone Test, Replacement Puzzle Test, Gumpgookies — A Test of Motivation to Achieve, and the Preschool Interpersonal Problem Solving Test. Test data will be supplemented by three teacher-rated behavior inventories: (1) Scale of Effectiveness Motivation, which consists of statements describing the child's behavior in the nursery, including effectiveness of play, hyperactivity, and self-confidence; (2) Schaefer Classroom Behaviour Inventory, which measures introversion and extroversion, task orientation, and adjustment; and (3) E.T.S. Behaviour Inventory, which measures aggression, verbal and social participation, timidity, independence, and achievement motivation. The tester will rate subjects' social and emotional behavior during testing (Test Behaviour Inventory).
Duration: October 1973-March 1978.

35-DB-3 A STUDY OF EGO AND COGNITIVE DEVELOPMENT IN YOUNG CHILDREN

Investigator(s): Jack Block, Ph.D., Professor; and Jeanne Block, Ph.D., Research Psychologist, Department of Psychology, Institute of Human Development, University of California at Berkeley, Tolman Hall, Berkeley, California 94720.
Purpose: To investigate, from a personality/motivation point of view, some of the issues involved in the development and patterning of thought.
Subjects: 160 boys and girls assessed annually at ages 3, 4, 5, 6 (partial assessment), and 7. The sample is 60 percent white and includes black, Oriental, and Mexican-American subjects and their parents.
Methods: This is a longitudinal study in which a battery of widely ranging procedures is used to annually assess the children's categorization, satiation, curiosity, delay of gratification, affect differentiation, role taking, sharing, conservation, creativity, motor inhibition, activity level, and dual focus. Assessment instruments include the Wechsler Primary and Preschool Scale of Intelligence, Embedded Figures Tests, Rod and Frame Test, Ravens Progressive Matrices, Peabody Picture Vocabulary Test, and Matching Familiar Figures Test. Standardized situations were developed specifically for this project to assess the child's responses to a barrier

(obstacle) impeding progress to a specific goal. Parents completed a childrearing practices Q sort, an adjective self-descriptive Q sort, and were observed teaching their child one of two teaching strategy batteries. Data obtained from experimental assessments are compared with independent observers' descriptions of children's behaviors in naturalistic settings. Parental behaviors are correlated with child behaviors. The investigators are attempting to develop measures that meet criteria for both convergent and discriminant validity. Multivariate, correlational, and other analytic strategies are employed.
Duration: September 1969-continuing.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: (1) Block, J.; Block, J.; and Harrington, D. Some misgivings about the Matching Familiar Figures Test as a measure of reflection-impulsivity. *Developmental Psychology,* 1974, 10, 611-632. (2) Block, J. Conceptions of sex role: Some cross-cultural and longitudinal perspectives. *American Psychologist,* 1973, 28, 512-526.

35-DB-4 DEVELOPMENT OF A MODEL OF CONTENT COMPREHENSION

Investigator(s): Ronald Raven, Ed.D., Professor, Faculty of Educational Studies, State University of New York at Buffalo, Buffalo, New York 14214.
Purpose: To construct a cognitive-social model of content comprehension for school students.
Subjects: Children, ages 9, 11, 13, 15, and 17.
Methods: A content comprehension test based on Piaget's logical operations will be constructed. This involves group and individual testing using a 40-item multiple choice verbal test. In individual testing, the subject is asked to give a reason for each answer.
Duration: May 1975-August 1978.

35-DC-1 RELATION OF FORWARD AND BACKWARD DIGIT REPETITION TO NEUROLOGICAL IMPAIRMENT IN CHILDREN WITH LEARNING DISABILITIES

Investigator(s): Rita G. Rudel, Ph.D., Associate Clinical Professor; and Martha B. Denckla, M.D., Assistant Professor, Department of Neurology, College of Physicians and Surgeons, Columbia University, New York, New York 10032.
Purpose: To examine the digit span (an index of short-term memory) of children with learning disabilities in relation to their overall Wechsler Intelligence Scale for Children scores and neurological examinations.
Subjects: 297 children: 232 boys and 65 girls, ages 5.5 to 18.8, who attended classes or schools for children with learning disabilities.
Methods: Subjects were administered the Wechsler Intelligence Scale for Children (WISC) by a project associate or psychologist. Subjects also received a standard and an extended neurological examination and were classified as bilateral, right-sided, or left-sided with respect to their signs mainly on the basis of limb strength, tone, reflexes, posture and coordination; since cranial nerve dysfunctions, if present, were almost always bilateral, and sensory dysfunctions were rarely found. No division was made between *hard* signs (abnormalities of strength tone, reflex; dramatic deviation from normal posture or coordination; presence of gross involuntary movement) and *soft* signs (mild abnormalities of posture and coordination; moderately abnormal involuntary and overflow movements). Results were analyzed by obtaining a mean digit span scaled score (DSSS), the sum of the digits forward (DF), and digits

backward scores (DB) on the WISC. DSSS were compared to mean full scale and verbal or performance IQs. DF and DB scores were checked for covariance with DSSS and performance IQs (Pearson product-moment correlation coefficient). Other analyses include comparisons between subjects with normal and large gaps between the forward and backward digit spans, comparisons of subjects with different neurological impairments (dominantly left-sided, right-sided, or bilateral impairment), and checks for age and IQ influences.

Findings: On the short-term memory task, the mean digit span scaled score (DSSS) of the subjects was 7.65, considerably below the expectation for the mean full scale, verbal or performance IQs of the group: 94.13, 95.06, and 93.83, respectively. In addition, 90 subjects (30.3 percent) had a discrepancy of three or more digits between their forward and backward spans, and the backward span was lower. The low DSSS of the group did not covary with this gap ($r=-0.02$). The discrepancy between forward and backward scores (the digit span gap) was unrelated to the verbal or performance IQs of the group ($r = -0.09$ and -0.10, respectively). Children with learning disabilities tended to have a short-term memory defect, apparent in immediate direct recall, and even more striking when the incoming information needed to be reversed. Subjects designated as having primarily right-sided signs (possible left speech hemisphere damage) did most poorly in terms of DF compared to other neurological groups, and were most likely to have language disturbances. Groups of subjects with no neurological impairment and with bilateral signs showed very small and insignificant differences between verbal and performance IQs. Groups with left-sided signs (right hemisphere impairment) had higher verbal than performance IQs ($p<.002$), and those with right-sided signs (left hemisphere impairment) had lower verbal than performance IQs ($p<.05$). Analysis of the data by age suggested that the large gap between forward and backward digits (characteristic of the group with left-sided signs) tends to increase with age, since their ability to repeat digits forward improves without concommitant improvement in their ability to repeat them backward. Conversely, the backward span of the group with right-sided signs tends to catch up and even equal their limited forward repetition. The data appear to support a left-hemisphere-dependent auditory verbal component of the digit span task reflected in digits forward, and a right-hemisphere-dependent, visuospatial component reflected in digits backward. The distribution of verbal and performance WISC scores of these subjects, as well as their forward and backward digit spans, suggest that patterns of adult hemisphere asymmetry are similar in children with restricted early brain damage.

Duration: 1972-completed.

Cooperating group(s): Robinson Ophthalmic and Dyslexia Fund; National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Rudel, R. G. and Denckla, M. B. Relation of forward and backward digit repetition to neurological impairment in children with learning disabilities. *Neuropsychologia,* 1974, 12, 109-118.

35-DC-2 EFFECTS OF FADING PROCEDURES ON INTRADIMENSIONAL AND EXTRADIMENSIONAL SHIFTS

Investigator(s): Delos D. Wickens, Ph.D., Professor; J. Dennis Nolan, Ph.D., Associate Professor; and Sabine S. Himmelfarb, M.A., Department of Psychology, Ohio State University, 1945 North High Street, Columbus, Ohio 43210.

Purpose: To evaluate the effects of using facing procedures on the occurrence of attentional responding in learning discriminations and shifts.

Subjects: 60 boys and girls in first grade, ages 6.2 to 7.2.

Methods: A 2 (intradimensional versus extradimensional shift) x 2 (color versus form initially relevant) x 2 (trial and error versus fading procedures) design was used in which extraneous variables were counterbalanced. Modified Wisconsin general test apparatus was utilized.

Findings: As expected, trial and error procedures produced faster intradimensional learning for the most salient dimensions but not for the least salient dimensions. Fading may not be as effective in strengthening dimensional attention responses.
Duration: January 1974-completed.
Cooperating group(s): Clinton Elementary School, Columbus, Ohio.

35-DC-3 STIMULUS ENRICHMENT: METHODOLOGICAL PROBLEMS AND SOLUTIONS

Investigator(s): Douglas Friedrich, Ph.D., Research Director; Mark Manning, M.A., Research Associate; and Fred Beno, M.A., Research Associate, Department of Psychology, Central Michigan University, Mount Pleasant, Michigan 48859.
Purpose: To assess the utility of stimulus enrichment tasks with slow learning, average, and gifted children in preschool through grade 6.
Subjects: 932 slow learning, average, and gifted boys and girls in preschool to sixth grade, selected from both small and large community school systems.
Methods: The following variables were included in the research design: (1) cognitive level (slow learner, average, gifted), (2) grade, (3) sex, (4) mode of presentation (verbal, visual, concrete), (5) enriched number of referents (3, 4, or 5), and (6) order of presentation (regular-enriched or enriched-regular). The general task employed was the Wechsler Similarities Subtest. In the regular nonenriched procedure, two stimulus words, pictures, or objects were included; e.g., "In what way are a plum and a peach alike?" Enriched procedures included three, four, or five defining referents for a concept; e.g., "In what way are a plum, peach, apple, pear, and banana alike?" Since earlier research confounded order of task presentation, in this study all variables were manipulated with order counterbalanced. Data analysis included numerous repeated measures analyses of variance.
Findings: Most representative of the multiple analyses of variance is the Mode of Presentation X Cognitive Level X Order X Trial Block analysis. Significant effects were found for Cognitive Level, Order, Trial Block, and Order X Trial Block. Analyses for each age group and number of enriched referents resulted in similar variable effects. The significant effects involving order lead to strong questions about previous research on stimulus enrichment; particularly, research that indicates a facilitating effect of increased referents on verbal abstracting tasks. Item difficulty analyses indicated that the task included items that varied significantly in difficulty. Research is being conducted to replicate the above study variables using task items with homogeneous item difficulty.
Duration: September 1974-November 1975.
Cooperating group(s): Gladwin, Harrison, and Saginaw School Systems, Michigan; Central Michigan University Research and Creative Endeavors Committee.
Publications: An initial summary of the project, "Input deficit: Some more data," is available from the investigators.

35-DC-4 PAIRED ASSOCIATE LEARNING OF MORSE CODE AND BRAILLE LETTER NAMES BY DYSLEXIC AND NORMAL CHILDREN

Investigator(s): Rita G. Rudel, Ph.D., Associate Clinical Professor; Martha B. Denckla, M.D., Assistant Professor; and Elinor Spalten, M.A., Research Assistant, Neurological Institute, College of Physicians and Surgeons, Columbia University, New York, New York 10032.
Purpose: To test dyslexic children's acquisition of letter names to new stimuli presented in three modalities: vision, touch, and audition; and to compare the performance of dyslexic and

normal children on a visual braille task, a tactual braille task, and an auditory Morse Code task, in order to clarify the role of intersensory processes in dyslexia.

Subjects: Experimental group: 18 boys and 2 girls, mean age 10.11, with learning disabilities and considered dyslexic according to school criteria. These subjects had a mean reading age of 7:45. Control group: 20 children matched for age, sex, and group mean IQ, but with reading scores at grade level or better.

Methods: Subjects were tested on three tasks: tactual braille, visual braille, and Morse Code. In the tactual braille task, subjects touched four practice letters with their index finger. The braille letters were presented separately and identified in turn by the experimenter. Next, the subject named the letters upon presentation in a different order and obtained correction when incorrect. The procedure was repeated six times or until the subject identified correctly all four letters. Experimental List A of six letters was presented for three learning and three recall trials with experimenter corrections using the same hand as in the practice trials. The entire procedure was then repeated with the same practice letters but with Experimental List B of six letters for the other hand. List A was used equally frequently with the left hand as with the right. The same method and order of testing was used for the visual braille and Morse Code tasks. In the visual braille task, the subject was shown in full view braille letters typed on cards while the experimenter identified it. In the Morse Code task, the experimenter named the letter and then produced the appropriate dots and dashes on a telegraph key.

Findings: The dyslexic subjects learned fewer letters in all three modalities, although, for both groups, the visual-verbal method was easiest. The deficits were not attributable to specific modality dysfunction nor to a failure of intersensory integration. More general encoding and retrieval difficulties appear to be implicated.

Duration: Fall 1973-spring 1974.

Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare; Robinson Ophthalmic and Dyslexia Research Fund.

35-DC-5 DISCRIMINATION LEARNING IN YOUNG AUTISTIC AND MENTALLY RETARDED CHILDREN

Investigator(s): Fred Frankel, Ph.D., Research Psychologist; and James Q. Simmons, III, M.D., Psychiatrist, Department of Psychology, University of California at Los Angeles, Los Angeles, California 90024.

Purpose: To explore stimulus overselectivity in terms of behavioral physiological correlates.

Subjects: Seven autistic and four retarded children (4 girls and 7 boys), ages 3 to 7.

Methods: Both groups of children are equated for mental age on the Merrill-Palmer IQ Test. Subjects are trained to bar-press in the presence of a light-noise compound stimulus for preferred food reward. After reaching a criterion of responding nine times faster in S^d than in S^{delta} subjects are testing on light alone and noise alone. Physiological measures of GSR, heartrate and vasoconstriction are taken. Responding to S^d is partially reinforced on a V130 schedule, and test trials are arranged so that component stimuli are not associated with reinforcement or extinction.

Findings: Whereas retarded children respond to neither component when presented alone, autistic children respond either only to one stimulus (overselectivity) or to both component stimuli when presented alone. Furthermore, autistic children responding only to one stimulus show physiological responses to the other stimulus.

Duration: August 1973-November 1975.

Publications: Frankel, F.; Tymchuk, A. J.; and Simmons, J. Q. Operant analysis and intervention: Implications of current research. In Ritvo *et al., Autism: Diagnosis, management and current research.* Holliswood: Spectrum Publications (in press).

35-DD-1 THE EFFECT OF TEST INSTRUCTIONS AND ATTITUDE TOWARD SCHOOL ON INTELLIGENCE TEST SCORES

Investigator(s): David H. Bauer, Ph.D., Associate Professor; and Joseph R. Ballard, M.A., Student, Department of Psychology, California State University at Chico, Chico, California 95929.

Purpose: To investigate the effect of test instructions on scores obtained by children expressing positive and negative attitudes toward school; and to test the hypothesis that scores of children with positive and negative attitudes are affected differentially by *routine, achievement,* and *intelligence* test instructions.

Subjects: 216 fifth- and sixth-grade children (103 girls, 113 boys) from eight classrooms in a northern California elementary school. Inspection of occupations of heads of households indicated that children from a range of socioeconomic backgrounds were represented in the sample.

Methods: Children were randomly assigned to three conditions in which they were instructed that they were taking either an intelligence, achievement, or routine test. Prior to administration of the Kuhlmann-Anderson Intelligence tests, a modified Thurstone type of attitude inventory was used to assess children's attitude toward school. Based on their responses to the attitude inventory, children were classified as having either a generally positive or negative attitude toward school. Subsequently, a 2 X 3 (attitude X instructions) unweighted mean analysis of variance was conducted on subjects' Kuhlmann-Anderson scores.

Findings: Analysis of variance yielded an effect attributable to instructions significant at the .05 level. Paired comparisons indicated that the means of the routine and intelligence instruction groups were lower than the achievement group mean. An attitude effect was significant at the .01 level. The mean Kuhlmann-Anderson score for the positive attitude group was 104.23; and for the negative group, 94.02. Predicted interaction of instructions with attitudes was significant at the .10 level of confidence.

Duration: November 1974-May 1975.

Publications: A paper presented at the meeting of the Western Psychological Association, Sacramento, California, April 1975: Bauer, D. H. and Ballard, J. R. The effect of test instructions and attitude toward school on intelligence test scores.

35-DF-1 DEVELOPMENTAL ASPECTS OF ACQUIRING GEOGRAPHIC SENSE

Investigator(s): F. William Black, Ph.D., Assistant Professor, Neurology Department, Louisiana State University Medical Center, New Orleans, Louisiana 70112.

Purpose: To study the nature of children's ability to estimate geographic distances, do map localizations, and complete geographical orientation tasks in relation to their ages.

Subjects: 150 boys and girls, ages 6 to 16, from a large medical center population.

Methods: A test of geographic sense has been constructed and will be administered to the subjects. Wechsler Intelligence Scale for Children and achievement test scores, as well as other relevant psychometric data will be collected simultaneously.

Duration: March 1975-March 1976.

Publications: Copies of the test of geographic sense are available from the investigator.

35-DG-1 VISUAL MEDIATION OF INTERACTIONAL SYNCHRONY IN THE NEONATE

Investigator(s): J. Craig Peery, Ph.D., Assistant Professor, Department of Family and Child Development, Utah State University, Logan, Utah 84322.
Purpose: To determine whether a neonate's movement can be synchronized with adult movement when the only perceptual input is in the infant's eyes.
Subjects: 10 boy and girl 2-day-old infants who have had normal prenatal histories, normal births (with minimal or no anesthetic to the mother during birth), and APGAR scores of 9 to 10.
Methods: Videotapes are made during the second day of each infant's life in which an experimenter faces the infant (who is sitting in an infant seat) and talks, gestures, and smiles. During the experimental condition no vocalization is emitted by the experimenter, but words are mouthed and gestures and smiles are maintained. All infants experience both vocalizing and silent (control) conditions. The videotapes are made into a 16mm motion picture film and analyzed frame by frame. Synchronization of adult and infant movement is scored using techniques similar to those developed by Condon. (Condon and Sander discovered in 1974 that neonates can coordinate their movement with stress points in adult speech.)
Findings: Preliminary results indicate the presence of interactional synchrony in all the infants. Most subjects are able to maintain interactional synchrony with visual input only, i.e., without auditory input. The experimenter's approach produces some withdrawal movements from all subjects.
Duration: January 1975-June 1975.
Cooperating group(s): Agricultural Experiment Station, Utah State University; Logan Hospital.

35-DG-2 A STRUCTURED PERCEPTUAL MOTOR PROGRAM FOR 4- AND 5-YEAR OLDS

Investigator(s): Jimmie E. Cook, Ed.D., Director, Reading Clinic, Edinboro State College, Butterfield Hall, Room 203, Edinboro, Pennsylvania 16444.
Purpose: To determine if a rigid, controlled, structured perceptual motor program will benefit preschoolers when they enter the normal first grade reading program.
Subjects: 25 boys and 25 girls, ages 4 to 5, who have not had the normal unstructured nursery school experience.
Methods: The perceptual motor program is highly structured; it does not involve free play, and free choice is not available. Students will be compared to a randomly selected comparable group of children who have not received a similar program.
Findings: An intermittent check by various test instruments indicates that subjects are farther along in perceptual motor program development than children of a comparable age and background.
Duration: September 1974-January 1977.

35-DG-3 INFANT PERCEPTION OF SPEECH AND NONSPEECH SOUNDS

Investigator(s): Rita B. Eisenberg, Sc.D., Director, Bioacoustic Laboratory; Anthony Marmarou, Ph.D., Director, Biomedical Engineering; and D. B. Coursin, M.D., Director, Research Institute, St. Joseph Hospital, Lancaster, Pennsylvania 17604.
Purpose: To determine whether the auditory evoked responses (AER) of very young infants,

measured at specified sites on the left and the right sides of the scalp, vary systematically according to the presence or absence of an onset-transient; and to obtain normative data on developmental changes in the form of the AER under matched noise and speech conditions.
Subjects: Preliminary sample: 30 to 50 control infants, under 2 weeks of age, equally divided by sex.
Methods: Infants will be swaddled and scheduled for study at times conducive to natural sleep, although state effects will be evaluated rather than controlled. Evoked potentials recorded from symmetrical sides of the scalp will be studied with reference to the amplitude and latency of the major peaks in the auditory evoked potential (AEP). Criteria for comparing wave forms will be based upon both amplitude and shape of the AER. For normative purposes, this study will determine the statistical distribution of these parameters across subjects.
Findings: Preliminary data suggest that speech-like signals are characterized by longer latencies than noise stimuli or clicks.
Duration: May 1975-April 1978.

35-DG-4 EFFECT OF RATE OF SPEAKING AND VOCAL INTENSITY UPON VERBAL TRANSFORMATION PHENOMENON

Investigator(s): Robert L. McCroskey, Ph.D., Professor, Department of Logopedics, Wichita State University, Wichita, Kansas 67208; and John B. McCroskey, Student, Southeast High School, Wichita, Kansas.
Purpose: To replicate an experiment (Warren and Warren, 1970), in which a single word was repeated continuously at a rate of two times per second for 3 minutes, and the number of perceptual shifts in word identification was counted; and to alter the original conditions of the experiment by varying both rate of speaking and vocal intensity, in order to study the effects of such changes upon verbal transformations.
Subjects: 16 children, ages 15 to 17.
Methods: Tape loops were constructed to provide 3 minutes of continuous repetition of a single word at three rates of speaking and at two signal intensities. The listener's task was to write any word (s)he perceived during the 3-minute listening period for each of the conditions.
Findings: Results indicate that both rate and intensity of a continuously repeated word influence the number of verbal transformations perceived.
Duration: January 1975-May 1975.
Cooperating group(s): Wichita Public Schools.
Publications: Warren, R. M. and Warren, R. P. Auditory illusions and confusions. *Scientific American*, 1970, 223(6), 30-36. The results of the study are available from the investigator.

35-DG-5 THE DEVELOPMENT OF DIAGNOSTIC PROCEDURES FOR PERCEPTUAL DEFICITS

Investigator(s): Robert B. Lawson, Ph.D., Professor, Department of Psychology, University of Vermont, Burlington, Vermont 05401.
Purpose: To develop a series of visual and auditory tasks for diagnostic purposes that require information processing (pattern recognition, discrimination, and memory) across different sensory channels and stimulus dimensions.
Subjects: Eight boys and two girls, ages 6 to 12, with reading difficulties.
Methods: Visual and auditory stimulus patterns that required different levels of difficulty were employed in order to process the stimulus information. Visual stimulus patterns were either two-dimensional or three-dimensional displays.

Findings: Subjects performed better on a visual-auditory pattern matching task when the visual display was three-dimensional rather than two-dimensional.
Duration: September 1974-May 1975.
Cooperating group(s): Communication Disorder Center, Medical Center Hospital of Vermont.

35-DG-6 EFFECT OF VISUAL AND AUDITORY DISTRACTORS ON SELECTIVE ATTENTION

Investigator(s): John W. Hagen, Ph.D., Professor, Department of Psychology, University of Michigan, Ann Arbor, Michigan 48104.
Purpose: To explore further the effects of specific distracting situations on the performance of children at two age levels in a task of selective attention.
Subjects: Two groups of 30 boys and 30 girls at two age levels: second and third graders, and sixth and seventh graders. The subjects are predominantly white, from middle class backgrounds.
Methods: At each age level there are three groups: (1) a visually distracting task is introduced after stimuli of the major task have been presented but before a test for performance is given, (2) an auditory distracting task is introduced at the same point in procedure as in (1), and (3) no distraction is used (control). The major task is the central-incidental task of selective attention used in numerous previous studies. Analysis of variance and selected contrasts will be used in analyses.
Duration: January 1975-August 1975.

35-DH-1 PRESCHOOL READING AND THE DEVELOPMENT OF BILINGUALISM

Investigator(s): Al Past, M.A., Program Assistant; and Kay Past, B.A., Teacher, Intensive English Program, International Office, University of Texas, 2711 Geraghty Avenue, Austin, Texas 78757.
Purpose: To determine if a preschool child can learn to read two languages, English and Spanish; and to determine if there is transfer from written to oral Spanish, the subordinate language.
Subjects: One girl, studied from ages 2 to 5.
Methods: The child receives reading instruction based on Glenn Dowan's whole word approach in which the child arrives at rules and generalizations internally. The child's Spanish environment is limited to several children's television programs, visits with friends, and home conversation approximately 1 or 2 hours a day.
Findings: The reading program has been very successful. The subject's English has been informally evaluated at the third grade level, and her Spanish reading ability is comparable. Transfer has been more difficult to measure. Many lexical items and idioms have been observed, but general reinforcement is thought to be at least as important.
Duration: September 1973-September 1976.

35-DH-2 REALIZATION OF INFLECTIONAL MARKERS IN THE WRITING OF A BLACK THIRD GRADE POPULATION

Investigator(s): Henry Goehl, Ph.D., Professor; and Adele Gerber, M.A., Assistant Professor, Department of Speech, Temple University, Philadelphia, Pennsylvania 19122.
Purpose: To describe the relation of inflectional marker realizations in black children's speech and writing; and to examine the effectiveness of instruction on inflection realization in writing.
Subjects: Two groups each of 30 third grade black children.
Methods: Two groups of children wrote sentences from dictation that contained representative instances of plurals, possessives, and third person singular and past tense forms. Subjects also imitated a standard speaker's pronunciation of the sentences. One group received explicit training in writing inflections throughout an academic year. The trained group and the untrained group were compared. Correlations of speech and writing were made.
Findings: The realization of inflections appears different in amount and kind between speaking and writing.
Duration: September 1974-June 1975.
Cooperating group(s): The Archdiocese of Philadelphia.

35-DH-3 THE ROLE OF REPETITION THROUGH SUCCESSIVE APPROXIMATIONS IN THE ACQUISITION OF THE FOUR BASIC LANGUAGE SKILLS

Investigator(s): Katherine M. Littell, Ph.D., Assistant Professor, Department of Modern Languages, Literatures, and Linguistics, Bucknell University, Lewisburg, Pennsylvania 17837.
Purpose: To examine language acquisition within the four skill areas of listening, speaking, reading, and writing as it is affected by both nondistorted retardation and repetition of speech.
Subjects: 81 high school German language students, ages 14 to 18, in Pennsylvania public schools. The sample was controlled for sex.
Methods: Subjects were randomly assigned to one of three groups. Group I heard for one time only taped materials that were reduced in speed to a point where comprehension was assured. Group II heard material three times identical to that of Group I, except that the speed was successively increased from a base level 20 percent slower than normal (first presentation), to an intermediate level 10 percent slower than normal (second repetition), to a third repetition of the identical material at normal speed. Group III heard individual tapes presented once at a normal rate of speaking. All reductions in speed were accomplished by a speech compressor and were completely undistorted. The Pimsleur Language Aptitude Battery was used to determine the language aptitude of all subjects. Particular concepts within skill areas were arbitrarily chosen for examination; e.g., the indefinite article nominative and accusative for writing and inverted word order for speaking. At approximately 2-week intervals, identical tests, based on the Modern Language Association standardized tests in the four skill areas, were given to all groups to determine the extent of comprehension and transfer ability. Analysis of variance was performed on all data within each skill area to identify the results of the three different treatments and their interactions with sex and language ability. A Newman-Keuls posttest analysis was applied when significant means or interaction effects occurred to determine significant differences between appropriate pairs of group means.
Findings: The subjects' performance was differentially affected as a function of sex, language ability, and treatment, indicating a need for greater differentiation of teaching strategies within generally defined methodologies. A particular overall method, such as audiolingual presentation, grammar translation, or reading, is not so important as highly specialized strategies directed to specific groups of students and to individual skills related to the concept being

taught. The investigator recommended that (1) minicourses, individualized instruction, and drills be varied by more frequent references to interest arousing situations; (2) tapes of various speeds be made available in the language laboratory and the classroom, so that practice may be individualized as much as possible; (3) the speech compressor to be used at all levels of language instruction, expecially at the intermediate level and in composition and conversation courses, since diversity of ability often gives rise to frustration over the pacing of instruction; and (4) more controlled experimentation be encouraged to determine the effectiveness of other widely accepted strategies.
Duration: August 1973-completed.
Cooperating group(s): Lewisburg High School; Line Mountain Junior High School; National Institute of Education, U. S. Department of Health, Education, and Welfare.

35-DH-4 A STRUCTURED LINGUISTIC READING PROGRAM FOR DISABLED READERS

Investigator(s): Jimmie E. Cook, Ed.D., Director, Reading Clinic, Edinboro State College, Butterfield Hall, Room 203, Edinboro, Pennsylvania 16444.
Purpose: To determine if fourth level readers of normal intelligence or above, who are at least 2 years retarded in reading ability, benefit from a structured linguistic reading program.
Subjects: 20 boys, ages 9 to 10, who are at least 2 years retarded in reading, selected at random from a previously selected group of 100.
Methods: The reading program is strictly linguistic. Students receive 4 hours of training per week. Performance increments will be measured by Standard Reading Inventory Forms A and B. No control group is used.
Findings: Observation indicates substantial improvement.
Duration: January 1975-December 1975.

35-DH-5 THE ACQUISITION OF LINGUISTIC STRUCTURES

Investigator(s): Ruth Clark, B.A., Lecturer, School of Speech Therapy; Sandy Hutcheson, Licentiateship, Lecturer, College of Speech Therapists; and Paul Van Buren, B.A., Lecturer, Department of Linguistics, University of Edinburgh, Edinburgh, Scotland.
Purpose: To elucidate the mechanisms and strategies underlying the acquisition of syntax; to explain characteristic errors in children's syntax in terms of psychological, rather than linguistic, theories; and to investigate the relationship of the child's speech to previous adult utterances.
Subjects: One boy studied from ages 15 months to 4 years.
Methods: Daily changes in the subject's speech are recorded. Special equipment enables the mother to monitor the subject's speech for about 30 hours a week and to obtain live recordings of novel utterances and the preceding adult utterances. Checks on the objectivity of selection are performed by periodic continuous recordings, some at randomly selected periods when the mother is unaware of the recording, and by making complete records of speech at intervals over several hours.
Findings: This study confirms the findings of an earlier study with the subject's older brother. In particular, it confirms the importance of imitation in the development of syntax, of other mechanical operations on the input, and of simple strategies in constructing longer utterances.
Duration: November 1972-August 1977.
Cooperating group(s): Nuffield Foundation

Publications: (1) Clark, R. Adult Theories, child strategies and their relevance for the language teacher. In *Edinburgh Course I, Applied Linguistics, Vol. II.* Oxford: Oxford University Press, 1975. (2) Clark, R. Performing without competence. *Journal of Child Language,* 1974, 1(1), 1-10. (3) Clark, R.; Hutcheson, S.; and Van Buren, P. Comprehension and production in language acquistion. *Journal of Linguistics,* 1974, 10, 39-54. Papers on the present study are available from Ms. Clark.

35-DH-6 EVERYDAY CARETAKER TALK TO TODDLERS, THREES, AND FOURS

Investigator(s): Frances Fuchs Schachter, Ph.D., Director, Barnard Center for Toddler Development, Barnard College, 606 West 120th Street, New York, New York 10027.
Purpose: To examine everyday caretaker speech usage addressed to 2- to 4-year olds in order to study environmental assistance and first language acquistion.
Subjects: 12 teachers, 4 working with each age level: toddler, three, and four.
Methods: Teachers were observed individually for 24, 3-minute intervals during free play. Teachers' speech to their children was classified into 45 responsive and spontaneous functional categories based on the investigator's previously developed classification scheme, the FIS-P (Schachter *et al.*, 1974), for spontaneous child speech.
Findings: The results support hypotheses derived from Piagetian theory concerning early developments in ego differentiation. Speech patterns occurring in increments in speech to toddlers include explicating desires, providing substitutes for prohibitions, reporting on the child, and word teaching (i.e., alter ego speech). Patterns with increments for 3- and 4-year olds include enhancing the child's ego, assisting children to fulfill desires themselves, and encouraging persistence (i.e., ego-supportive speech). Modulations (explanations and justifications) and admonitions with appeals to norms (i.e., ego-socializing speech) are also found in patterns of speech of 3- to 4-year-old children.
Duration: 1974-1975.
Cooperating group(s): Columbia Greenhouse Nursery School.
Publications: Schachter, F. F. *et al.* Everyday preschool interpersonal speech usage: Methodological, developmental, and sociolinguistic studies. *Monographs of the Society for Research in Child Development,* 1974, 39(3, Serial No. 156).

Personality

35-EA-1 FOLLOW-UP STUDY OF CHILDREN WHO PARTICIPATED IN THE RESEARCH PROJECT ON THE NORMAL SEPARATION-INDIVIDUATION PROCESS AT THE MASTERS CHILDREN'S CENTER (1959-1971)

Investigator(s): John B. McDevitt, M.D., Associate Director of Research; Margaret S. Mahler, M.D., Consultant; and Anni Bergman, M.A., The Masters Children's Center, 75 Horatio Street, New York, New York 10014.
Purpose: To assess children's personality development and ability to cope with the stresses and strains of life at ages 7 to 13 in relation to their particular development during the separation-in-

dividuation process in the first 3 years of life; to explore the findings of previous studies in order to determine the influence of the separation-individuation process on aspects of children's personality development in latency and early puberty; and to evaluate the similarities and differences in developmental outcomes of siblings.

Subjects: 17 children, ages 7 to 13, from nine families, out of 38 children in 23 families who participated in a research project on the normal separation-individuation process at The Masters Children's Center from 1959 through 1971.

Methods: The intrapsychic separation-individuation process occurs from 5 months to 3 years of age under normal circumstances and involves children's gradual separation from their symbiotic union with their mothers and recognition of themselves as separate individuals. A thorough study of the early data on the children's separation-individuation processes was made, culminating in predictions regarding children's later personality and behavioral development. This predictive method was used as a tool to provide sharper definition of ideas, better capacity for observation, and necessary evaluation of the early and later findings and assumptions with respect to relevance. A systematic clinical follow-up study of the children's personality development at later ages was conducted. Data were collected from interviews with each subject, interviews with parents, home visits, school visits, all available past and present school records, and a brief film of each child for comparison with previous film records. Psychological tests were administered to subjects and a psychologist compared the children's current tests with their earlier developmental tests, with their mothers' psychological tests from the earlier study, and with test findings on siblings. The findings of the follow-up study will be correlated with the findings of the earlier study.

Duration: January 1972-continuing.

Publications: (1) McDevitt, J. B. and Settlage, C. F. (Eds.) *Separation-individuation: Essays in honor of Margaret S. Mahler.* New York: International Universities Press, 1971. (2) Mahler, M. S. and Furer, M. *On human symbiosis and the vicissitudes of individuation. Vol. I. Infantile psychosis.* New York: International Universities Press, 1968.

35-EA-2 MOTHER-CHILD INTERACTIONS: A COMPARISON BETWEEN NORMAL AND DEVELOPMENTALLY DELAYED GROUPS

Investigator(s): Ann M. Garner, Ph.D., Professor; Leif Terdal, Ph.D.; and Russell H. Jackson, Ph.D., Children's Development and Rehabilitation Center, University of Oregon Medical School, Portland, Oregon 97201.

Purpose: To compare dyadic interactions of normal and delayed child-mother pairs, in both structured and unstructured standard situations, with special reference to three behavioral dimensions: child responsiveness, maternal directiveness, and range of maternal behavior.

Subjects: 40 normal children: 23 girls and 17 boys, ages 2 to 8, and their mothers; and 42 developmentally delayed children: 28 boys and 14 girls, ages 2 to 15, and their mothers. The mean IQ scores of the three mental age groups of delayed children were 46, 63, and 71.

Methods: Mother-child pairs were observed in standard laboratory situations, and behavior was coded according to an already published response class matrix. The method utilizes two coders: one coding the mother's consequent response to the child's behavior; the other coding the child's consequent response to the mother's behavior. Specific response classes were combined into behavioral indices, which were used in the group comparisons.

Findings: In free play, the delayed children were less responsive to questions and interacted less than the normals. In the task situation, the two groups differed in long-term command efficiency. Mothers of delayed children were significantly more controlling, and their interactive behaviors were more diffusely spread over a range of child antecedent behaviors than in the normal sample.

Duration: 1970-1974.
Cooperating group(s): Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-EA-3 FROM PRESCHOOL TO PREADOLESCENCE: A LONGITUDINAL STUDY

Investigator(s): Martin Kohn, Ph.D., Research Psychologist, William Alanson White Institute of Psychiatry, Psychoanalysis, and Psychology, 20 West 74th Street, New York, New York 10023.
Purpose: To track children's social-emotional development over a 5-year period; to investigate the relationship between children's social-emotional development and academic functioning; and to determine the feasibility of detecting during preschool years children at risk of developing personality or behavior problems.
Subjects: 1,232 boys and girls, ages 3 to 5, followed up to age 10, predominantly from lower and lower middle class families. The subjects were randomly chosen from all children in New York City public day care centers in November 1967.
Methods: Social-emotional variables were followed by teacher rating instruments designed to assess three major syndromes of disturbance: (1) apathy-withdrawal (personality problems), (2) anger-defiance (conduct problems), and (3) low task orientation (hyperactivity). Two global measures, Global Impairment and Referral, were also used. During preschool years, children were assessed every 6 months. After entry into elementary school, subjects were assessed once a year. During 4 of the elementary school years, the children were also assessed yearly on a number of measures of academic attainment: (1) standard achievement tests, (2) teachers' ratings of academic standing, and (3) grade levels skipped or retained. (See also *Research Relating to Children, Bulletin 31,* September 1972-February 1973, Study 31-EA-1, pp. 69-70.)
Findings: Children are stable over a 4-year period on specific syndromes of disturbance. The apathy-withdrawal and low task orientation syndromes are predictive of underachievement, while the anger-defiance syndrome appears to have no appreciable relationship to academic functioning. Many high risk cases can be detected at an early age.
Duration: September 1967-December 1975.
Cooperating group(s): National Institute of Mental Health, Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare.
Publications: (1) Kohn, M. and Parnes, B. Social interaction in the classroom: A comparison of apathetic-withdrawn and angry-defiant children. *Journal of Genetic Psychology,* 1974, 125, 165-175. (2) Kohn, M. and Rosman, B. L. Social-emotional, cognitive and demographic determinants of poor school achievement: Implications for a strategy of interventions. *Journal of Educational Psychology,* 1974, 66, 267-276. (3) Kohn, M. and Rosman, B. L. Cross-situational and longitudinal stability of social-emotional functioning in young children. *Child Development,* 1973, 44, 721-727. (4) Kohn, M. and Rosman, B. L. Relationship of preschool social-emotional functioning to later intellectual achievement. *Developmental Psychology,* 1972, 6, 445-452.

35-EA-4 THE DEVELOPMENT OF IMITATION IN CHILDREN 1 TO 3 YEARS OLD

Investigator(s): Robert B. McCall, Ph.D., Senior Scientist; and Ross D. Parke, Ph.D., Senior Scientist, Fels Research Institute, 800 Livermore Street, Yellow Springs, Ohio 45387.
Purpose: To study the circumstances under which children will learn and alter their behavior as

a function of seeing other children and adults behave in specific ways, either live or as presented on television.

Subjects: Middle class boys and girls, ages 1 to 3.

Methods: The number and age of the subjects depend on the particular set of observations undertaken. Depending on their purpose, longitudinal and cross-sectional approaches to observational and experimental research have been used. Major independent variables have included age, sex, type of behavior, method of modeling (e.g., live vs. televised), instruction to the subject to imitate or no such instruction, socioeconomic class, the presence of siblings, hours of television watched, ratings of child temperament, etc.

Findings: Findings are described in general terms in the publication reference listed below.

Duration: July 1973-June 1976.

Cooperating group(s): National Institute of Education, U. S. Department of Health, Education, and Welfare.

Publications: A paper presented at the meetings of the Society for Research in Child Development, Denver, Colorado, April 1975: McCall, R. B. Imitation in infancy.

35-EB-1 AN EXPLORATORY INVESTIGATION OF THE EFFECTS OF FATHER LOSS ON THE ADOLESCENT GIRL'S SEX ROLE IDENTITY, SELF-ESTEEM, AND LOCUS OF CONTROL

Investigator(s): Shirley Smowak, Ph.D., Director, Department of Advanced Psychiatric Nursing, Rutgers University, New Brunswick, New Jersey 08903; and June Horowitz, M.S., 213 Baldwin Street, New Brunswick, New Jersey 08902.

Purpose: To investigate the effects of father loss on the adolescent girl's sex role identity, self-esteem, and locus of control.

Subjects: 113 girls: 44 girls who have lost their fathers by death, divorce, separation, or prolonged absence, and 69 girls with fathers selected from a suburban public high school in the northeastern United States.

Methods: Three instruments and an information sheet administered in questionnaire form were used to collect the data. The Personal Attributes Scale was used to measure sex role identity; the Self-Esteem Inventory was used to measure self-esteem, and the Internal-External Locus of Control was used to assess personal and general locus of control. One-tailed two-sample binomial tests were performed to test each of the study's hypotheses. Scales were also correlated with each other to see if there were relationships between scores on certain scales for the whole sample and for girls with and without fathers.

Findings: Father loss showed no effect on the adolescent girl's sex role identity unless the time the loss occurred was considered. Girls who lost fathers before age 12 showed a less feminine sex role identity than girls who lost their fathers later. Father loss showed no effect on the adolescent girl's self-esteem, regardless of the type of loss or age at the time of loss. Father loss did have an effect on the adolescent girl's general locus of control; girls who lost their fathers showed a more external locus of control. The following correlations between scales were found for the whole sample (girls with fathers and girls without fathers): (1) general and personal locus of control showed positive correlation; (2) self-esteem showed a negative correlation with sex role identity; i.e., as self-esteem went down, femininity went up and (3) self-esteem correlated negatively with general locus of control; i.e., as self-esteem went down, external locus of control went up. For the whole sample and for girls with fathers, self-esteem and personal locus of control were negatively correlated; i.e., as self-esteem decreased, external locus of control increased.

Duration: September 1974-May 1975.

Cooperating group(s): Edison High School, Edison, New Jersey.

35-EC-1 LOS ANGELES ENERGY CRISIS STUDY

Investigator(s): David O. Sears, Ph.D., Professor, Department of Psychology, University of California at Los Angeles, 405 Hilgard Avenue, Los Angeles, California 90024.

Purpose: To examine the effects of the energy crisis on Los Angeles children and adults and the antecedents of energy conservation in both groups; in particular, to test the hypotheses that (1) diffuse system support increases children's compliance to the government line on energy; and (2) children will react to the crisis in terms of their standing political predispositions, as opposed to how they are personally affected by the crisis; and to study the energy crisis as a socializing event.

Subjects: A random sample of 195 Los Angeles children, ages 12 to 17, drawn from households in which adults were interviewed for a survey that yielded a multistage probability sample of 1,069 Los Angeles County residents, ages 18 and over.

Methods: One adult and one child from each household were interviewed by the University of California at Los Angeles Survey Research Center during February and March, 1974. To test the notion that diffuse system support increases compliance to the government line on energy, four scales of system support or attachment based on factor analyses of relevant items were used: (1) pride in the American political system, (2) approval of institutions such as Congress and the Supreme Court, (3) trust in the government in Washington, and (4) approval of specific political leaders across both parties. These scales include items taken from previous socialization, voting, and alienation studies. Four dependent variables were identified as the elements of support for the official government line. If attachment to the political system is a key factor in children's support for the government's line on energy, attachment should produce (1) more attention to the energy crisis, (2) greater belief that it was a severe shortage, (3) support for energy conservation policies, and (4) placing the blame for the crisis on foreign countries, oil and utility corporations, or wasteful private citizens rather than upon the United States government. Three scales were employed to measure children's partisanship: (1) attitudes towards Nixon based upon evaluations of him and his role in Watergate; (2) attitudes towards partisan politicians; e.g., Ford, Reagan, Kennedy, and McGovern; and (3) party identification. The second hypothesis (that children would respond to the crisis at the level of symbolic politics rather than at the level of personal self-interest) involves relating children's personal inconvenience or frustration to support for the government energy line. Measures of personal frustration included two measures of inconvenience directly caused by the crisis, four indicators of the impact of the crisis upon the family, a measure of the child's life satisfaction independent of the crisis, and a measure of the adult family member's life satisfaction and the family's financial trend. One question used to explore the energy crisis as a socializing event was, "How much attention have you been paying to what the government has been doing about the energy crisis?" Much of the data was analyzed with correlational techniques.

Findings: Diffuse system support did not contribute to childrens' and adolescents' support for the official government energy line. Partisanship, however, did contribute to support for the government energy line. Republicans and Nixon supporters were the keenest enthusiasts for the official energy policy, and Democrats and Nixon opponents were the least enthusiastic. There are considerable doubts that diffuse system support is based on idealization of the President, that it is independent of partisan attitudes toward incumbent authorities, and that it promotes compliant, prosocial responses to national crises. The hypothesis that people respond politically more on the basis of the residues of their earlier political socialization than on the basis of actual impact on their own lives was generally supported. The major exception was that personal frustration over the energy crisis was converted into anti-Nixon hostility, and to a lesser degree hostility against other targets. The personal impact of the crisis on children seems to have converted it into an occasion for their political socialization, both at the hands of their parents and peers.

Duration: January 1974-continuing.
Cooperating group(s): Institute of Government and Public Affiars, University of California at Los Angeles; National Science Foundation.
Publications: (1) Sears, D. O. Political socialization. In F. I. Greenstein and N. W. Polsby (Eds.), *Handbook on political science.* New York: Addison-Wesley (in press). (2) A paper presented at the 70th Annual Meeting of the American Political Science Association, August 1974, Chicago, Illinois: Sears, D. O.; Kinder, D. R.; Tyler, T. R.; and Rook, K. S. Symbolic heroes and villains in children's views of oil and the Mideast.

35-EC-2 EXTERNALITY AND CHILDREN'S PROBLEM SOLVING STRATEGIES

Investigator(s): Mary Budd Rowe, Ph.D., Professor; and Ruthellen Crews, Ed.D., Institute for Human Development Resources, College of Education, University of Florida, 513 Weil Hall, Gainesville, Florida 32611.
Purpose: To extend the theoretical and empirical differentiation of the concept of locus of control, especially its application to the inquiry behaviors of elementary school students classified as externals; specifically, to compare and describe ways in which children classified as externals or internals conduct two simple science investigations which differ in the level of structure but not in conceptual complexity; to compare the predictive validity of three locus of control measures; and to obtain the composite factor structure for three locus of control measures and determine by multiple regression techniques the efficacy of the factors as predictors of performance.
Subjects: Phase I: 5,000 sixth grade boys and girls. Phase II: 240 pairs of same-sex sixth grade students with different locus of control scores.
Methods: Phase I: The subjects were administered two locus of control measures: the Intellectual Achievement Responsibility Questionnaire (IAR) and the Nowicki-Strickland Test. A smaller sample was administered Soar's adaptation of the Rotter I-E Scale. Phase II: The subjects are presented with two science problems that vary in their degree of structure (high or low) but not in their cognitive complexity. Subjects receive a set of materials to conduct the science investigation. Cue selection and use are potentially under the subject's control. To obtain diagnostically useful information on children classified as externals, the data will be examined (1) to determine whether there is an interaction between level of task structure and locus of control in predicting performance, and (2) to determine whether the verbal language employed by externals to discuss their procedures and findings differ in any significant way from that employed by internals. Externals and internals will also be compared on certain task-related outcome variables; e.g., acquisition and retention of information, task persistence, type and number of questions asked, quantity and quality of explanations offered, and occurrence and quality of statements that tie inference to evidence.
Findings: The correlation between the IAR and the Nowicki-Strickland Test is low ($r = .33$).
Duration: March 1974-June 1976.
Cooperating group(s): Twelve counties in Florida; Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-EC-3 YOUTH AND MORAL DILEMMAS

Investigator(s): Norma Haan, Ph.D., Research Psychologist, Institute of Human Development, University of California at Berkeley, Berkeley, California 94720.

Purpose: To study changes in adolescents' moral development related to the impact of experience, the relationship between social structures and initial moral stage, and ego functioning.
Subjects: Experimental group: 72 adolescents, divided at early and late adolescence and according to social class and race. Control group: a comparable group of 24 adolescents.
Methods: All subjects were pretested and will receive two posttests. Assessment measures consist of moral dilemma stories, an ego process Q sort, and social structure and process Q sorts. The intervening experiences involve simulated and gaming moral conflicts.
Duration: June 1975-June 1976.
Cooperating group(s): Hazen Foundation, New Haven, Connecticut.

35-ED-1 DEVELOPMENT OF INHIBITORY CONTROLS IN THE CHILD

Investigator(s): John A. Stern, Ph.D., Professor, Behavior Research Laboratory, Washington University, 1420 Grattan Street, St. Louis, Missouri 63104.
Purpose: To develop tasks that can be utilized to evaluate the development of inhibitory control as a function of age and pathology in children with learning disabilities, hyperactivity, and *soft* neurological signs.
Subjects: Boys and girls, ages 8, 10, and 12, including some children from families with a history of addictions.
Methods: Inhibitory control is measured in three situations: (1) hand dynamometer (motor overflow), (2) reaction time (errors of commission), and (3) reading behavior (head and eye movements). Data are collected on analogue tape and procedures are being developed to reduce data on a computer.
Findings: Based on preliminary analysis, age related changes are apparent in children's development of inhibitory control. Findings indicate the need to carefully control for instructions even for simple tasks. Latencies or reaction times are very sensitive to task demands. This is true for response to stimulus onset and for response termination.
Duration: January 1972-continuing.
Publications: (1) A serial monograph presented at the Conference on Psychiatric Problems in Childhood, New York, February 1974: Studies on childhood: Psychiatry and psychological problems. Available from: PJD Publications Ltd., 10 Oakdale Drive, Westbury, New York 11590. (2) Stern, J. A.; Gold, S.; Hoine, H.; and Barocas, V. S. Toward a more refined analysis of the "overflow" or "associated movement" phenomenon. In D. V. Siva Sankar (Ed.), *Mental health in children,* Vol. II, PJD Publications Ltd. (in press).

Social

35-FA-1 IDENTIFYING CHILDREN WHO EXHIBIT LEADERSHIP BEHAVIORS IN FIRST GRADE

Investigator(s): Nancy L. Quisenberry, Ed.D., Assistant Professsor, Department of Elementary Education, Southern Illinois University, Carbondale, Illinois 62901; Joan Harris, M.S., First Grade Teacher; and Ralph Litterland, M.S., Director, Multi-Talent Program, Carbondale Elementary School District #35, Carbondale, Illinois 62901.

Purpose: To determine the reliability of The Primary Leadership Identification Instrument (PLII) in identifying leadership potential in first grade subjects.
Subjects: 88 boys and girls representing a wide range of socioeconomic levels and from five integrated, heterogeneously grouped first grade classrooms in a southern Illinois public school system.
Methods: The PLII dictates three separate observation periods: (1) an activity that calls for doing things with one's hands, (2) an intellectual activity, and (3) a physical activity. Six specific leadership behaviors were identified and observed. Observation periods were limited to 20 minutes with six children participating in any one observation period. Two classroom teachers and an impartial scorer were used as raters. Peer ratings of leadership abilities were also obtained. Data were correlated using the Spearman Rank Difference Method.
Findings: The PLII identified 11 of the 88 subjects as having strong leadership potential. Only five identified subjects were leaders in all three activities. Correlations made between peer identification of classroom leaders and identification of leaders using the PLII were insignificant for four of the five classes. Correlations of the three paired rankings of observed behaviors made by three scorers using the small group profile of the PLII were significant for the intellectual activity. Correlation of one paired ranking of observed behaviors made by two scorers using the small group profile of the PLII was significant for the physical activity, and was significant for the activity that calls for doing things with one's hands.
Duration: September 1973-completed.
Cooperating group(s): Carbondale Elementary School District #35, Carbondale, Illinois.

35-FA-2 YOUNG CHILDREN'S PLAY: A COMPARISON OF FEEPAYING AND NONFEEPAYING ENROLLEES IN A DAY CARE CENTER

Investigator(s): Kathleen Hoover Dunlop, Ph.D., Assistant Professor, Department of Early Childhood Education, George Peabody College, Nashville, Tennessee 37203.
Purpose: To determine if children from different socioeconomic circumstances exhibit differences, consistent with their socioeconomic circumstances, in their play with environmental objects.
Subjects: 29 boys and girls, ages 2 to 5, who attended a socioeconomically and racially heterogeneous day care center: 13 children were from income earning homes (feepaying), and 16 were from welfare supported homes (nonfeepaying).
Methods: Each child's spontaneous play with objects was examined through time sampling. Narrative descriptions of each child's activities during 5-minute time samples were recorded. Each child was observed for a total of 45 minutes. Play data were analyzed by t-tests with respect to five factors: (1) number of objects selected and played with, (2) type of objects selected and played with, (3) problem solving undertaken, (4) number of interactions with others undertaken, and (5) specific components of interactions with others.
Findings: No significant differences on any of the five factors were found between the feepaying and nonfeepaying groups of children.
Duration: February 1973-completed.
Cooperating group(s): Children's Center, Nashville, Tennessee.
Publications: Information is available from the investigator.

35-FA-3 RELATIONS OF PRESCHOOL BEHAVIOR TO PRESENT AND EARLIER PARENT AND CHILD CHARACTERISTICS

Investigator(s): Charles F. Halverson, Jr., Ph.D., Chief; and Mary F. Waldrop, M.A., Project Director, Section on Child Behavior, Child Research Branch, National Institute of Mental Health, Building 15K, 9000 Rockville Pike, Bethesda, Maryland 20014.
Purpose: To organize and describe patterns of behavior in young children through experimental and naturalistic studies; and to determine how these characteristics are related to parental behavior, earlier infant behavior, and earlier family data.
Subjects: 65 boys and 67 girls, ages 2.4 to 3.6; mean age, 2.11. All children are white and from middle to upper class families.
Methods: This project is the preschool phase of a longitudinal study of family development which follows couples from marriage through the birth of their first child and culminates in the preschool studies. The principal method being used is observation of children's activities during attendance at the research nursery school. The children attend the nursery school in groups of five each for 20 days. Prior to attending the school, each child comes to the school 1 day alone and 1 day with his mother. The school's atmosphere is similar to other laboratory nursery schools at universities, except, in this study (1) children are picked up at their homes by the teachers to ease the transition from home to school; (2) all experimental procedures are conducted as an integral part of the nursery school routine; and (3) tests and experiments are carried out by a teacher, in order to provide familiarity, only after 2 weeks of prior daily contact. The child's exploratory activity and play in the novel environment, in the absence of peers, and their reactions to the two teachers (male and female) are assessed. Observations of children's activities involve continuous recording and coding of child behavior in several settings from which data are transformed into a taxonomy of children's activities. Group experimental procedures and individual psychological tests are also administered. In general, four interrelated domains are studied: (1) interpersonal-social (prosocial peer behavior, peer conflicts, teacher interactions, and dependency behaviors); (2) cognitive-intellectual (intelligence, original play, verbal originality, speech development, and imaginative play); (3) emotional (excitability, fearfulness, expressiveness, and lability of affect); and (4) pace-tempo (physical movement in play measured by mechanical activity recorders, vigor in play, impulse control, and attention span).
Duration: 1968-1976.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: A list of publications, "Abstracts of Scientific Publications," is available from the investigators.

35-FA-4 STUDIES OF CROSS-AGE VERSUS SAME-AGE PEER INTERACTION

Investigator(s): Willard W. Hartup, Ed.D., Professor, Institute of Child Development, University of Minnesota, Minneapolis, Minnesota 55455.
Purpose: To examine the qualitative differences between the social interaction of children with age mates and nonage mates.
Subjects: Study I: 48 predominantly middle class Caucasian boys and girls, ages 3.5 to 5.3, divided into three groups of same sex dyads: (1) younger, mean age 3.7; (2) older, mean age 4.8; and (3) cross-age, mean ages 3.8 to 5.0. Study II: 20 boys and girls, ages 3.2 to 4.7, primarily Caucasian middle class children, but including a small number of racially mixed Head Start children; and 44 boys and girls, ages 2.5 to 5.0, racially mixed, predominantly children of university students and staff.

Methods: Study I: Pairs of children from different preschool classes played alone for two 10-minute sessions with either a sandbox or a table game. The children were brought to the room separately, introduced to each other, and told they were to stay there while the experimenter went to do some work. The children's behaviors were recorded by a hidden videotape camera. Videotapes were analyzed for positive and negative reinforcers; rate, complexity, sequence, and social function of language; visual regard; and play behaviors. Study II: Observations were conducted in two preschool classrooms. The children were observed one at a time in predetermined random order for 1 hour a day during free play time. The observer looked at a child and recorded his or her behavior at that moment, then looked at the next child, and continued in this manner until all children were observed. Observers completed as many complete observation cycles as time allowed. Behaviors were rated according to social level (interactive, parallel, and solitary play) and classified as normative, onlooker, or teacher directed behavior. Children's partners were noted when appropriate.
Duration: October 1973-June 1975.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-FA-5 CROSS-AGE VERSUS SAME-AGE PEER INTERACTION: COMPETITION AND COOPERATION

Investigator(s): Willard W. Hartup, Ed.D., Professor, Institute of Child Development, University of Minnesota, Minneapolis, Minnesota 55455.
Purpose: To examine the qualitative differences between the social interaction of children and age mates and children and nonage mates.
Subjects: Study I: 144 first and third grade middle class Caucasian boys and girls divided into 12 triads of first grade boys, of first grade girls, of third grade boys, and of third grade girls. Study II: 144 middle class Caucasian first and third grade boys and girls divided into 12 triads of same-age first graders, of same-age third graders, of one third grader and two first graders, and of two third graders and one first grader.
Methods: Study I: Triads of children of the same sex and age, but from different classrooms, were distributed across four experimental conditions: (1) mild competition, (2) cooperation, (3) strong competition followed by cooperation, and (4) strong competition followed by mild competition. The experimental task was to build one tower using one set of blocks during a 15-second time period. Cooperation and competition were manipulated by varying reward contingencies. Cooperative groups were rewarded with equal amounts of play money, while competitive groups were rewarded differentially. Cooperation and competition were assessed by counting the number of blocks contributed by each child to the group tower. Study II: The same methodology as Study I was used, except cross-age groups were included in the sample.
Duration: October 1973-June 1975.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-FA-6 THE SOCIALIZATION PROCESS IN PRESCHOOL

Investigator(s): Gunni Kärrby, Assistant Professor, Department of Educational Research, Gothenburg School of Education, Goteborg, Sweden. Address correspondence to: Lärarhögskolan i Molndal, Fack S-431 20 Mölndal, Sweden.

Purpose: To study the role apprehension and attitude structure of preschool teachers; to increase teachers' awareness concerning factors governing the child's capacity for tolerance and democratic partnership; and to provide teachers with practical experience to concretize the factors by developing methods (1) to increase the preschool child's self-knowledge (awareness of own feelings, modes of reaction, motives, and abilities); (2) to increase the child's understanding of others' feelings, reactions, and characteristics; and (3) to teach the child to cooperate.
Subjects: 12 preschool groups in Sweden, including six groups of 18 to 20 children, age 6, who participated in the insight and partnership programs.
Methods: Three types of programs were developed and tested in preschools. The insight program was designed to give children greater insight into their own feelings and motives and greater knowledge of others, their social situation, and different attitudes. The insight program consisted of suggestions and instructions on games, activities, reading, and conversation related to (1) knowledge of self; (2) knowledge of others; and (3) the family, including relationships, sex roles, birth, old age, and death. The partnership program was comprised of partnership exercises, determination of mutual goals by discussion, and the distribution of tasks and roles in working towards a common end. Exercises were conducted in randomly composed groups of three or four children and began with a puppet drama on partnership. Small groups were systematically observed before and after the partnership exercises, taking special note of solitary activity and partnership behavior. Three test situations were offered: constructive play, role playing, and free creation. The conflict resolution was also based on puppet dramas which provided a source of discussion on motives, feelings, and proposed solutions. Nine conflict situation dramas were devised and included events many preschool children had probably experienced: irritability, ostracism, aggressiveness toward teachers and other children, conflict on the rules of behavior, and conflicts with siblings. After the experiment, teachers responded to a questionnaire on the programs. To study teachers' role apprehension and attitude structures, each project team member established contact with a consenting day care center. Four areas of study were identified: (1) teachers' views of their roles, awareness of their work goals, problems they experience, their methods of solution, and their responsibility and liberty in relation to children, parents, and other staff; (2) preschool activities from the children's point of view, the explicit and implicit rules governing activities, the relation of rules to the needs of individual children, relationships between teachers and children, and the effect of the organizational structure on relationships; (3) how teachers influence children's social concept formation by their action in conflict situations and communication of their attitudes and values; and (4) how parents feel about the time their children spend in day care centers and their attitudes toward collaboration with personnel. Various research methods were used by team members, but all members were observers in a day care center. During the school year, project teachers attended monthly conferences, which yielded information on teachers' attitudes and modes of behavior in their work. Substudies are being conducted on the existing structure of activities, the interaction between teachers and children, the child's general experience of his time at the day care center, creative drama, preschool children's mothers, and siblings.
Findings: The children's knowledge increased in all aspects covered in the programs. They gave more answers suggestive of greater insight into motives, feelings, the cause of handicaps, etc. The most stimulating elements combined symbolic information with experience. For instance, a partially sighted person visited the preschool and joined the activities, which prompted many conversations and discussions. No major alteration of attitude, measured in terms of friendship preference, was observed. Some change was discerned related to sex role attitudes. Of the 18 small groups observed in the partnership test situations, 10 exhibited a 10 to 50 percent rise in partnership behavior. The greatest increase was observed in activities in which the children had the best previous knowledge. No systematic evaluation was undertaken of the puppet drama conflicts, but it was noted that the children's capacity for processing the material varied a great deal. The teacher often adopted a moralizing attitude; i.e., suggested solutions instead of letting the children arrive at their own solutions. All the teachers found the programs a stimulus in

their work. The discussions with the teachers revealed that their ways of implementing the programs varied a great deal. In addition, to some teachers the programs were merely one of many ingredients of collective work, while others derived from them impulses concerning a more general way of working and utilizing the spontaneous situations that arose in preschool activities. The discussions of the programs also made the teachers more conscious of their role as conditioner of attitudes and values.
Duration: 1972-continuing.

35-FA-7 SOCIAL INITIATIVE OF TODDLERS

Investigator(s): Charles Wenar, Ph.D., Professor, Department of Psychology, Ohio State University, Columbus, Ohio 43210.
Purpose: To define the behaviors comprising social initiative and chart their development in 2-year olds; and to determine the influence of various maternal behaviors on the development of social initiative.
Subjects: 25 toddlers, studied from ages 12 to 20 months, 14 boys and 11 girls, who are within the normal range of development.
Methods: Observational data were collected monthly in the home. Descriptive data were used to derive categories of maternal and child behavior. Mothers were selected to represent different childrearing philosophies and different emotional attitudes. Toddlers were categorized as high or low on executive competence. Repeated measures analysis of variance was used to analyze the data.
Findings: Social initiative becomes more frequent and more complex during the child's second year. While mothers become more responsive to toddlers' social overtures, there is no evidence that specific kinds of responses affected the developmental course of specific social overtures.
Duration: September 1973-June 1975.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-FA-8 THE ACQUISITION OF COMPETENCE IN KINSHIP SEMANTICS

Investigator(s): Anthony T. Carter, Ph.D., Associate Professor, Department of Anthropology, University of Rochester, Rochester, New York 14627.
Purpose: To describe the processes and stages by which children acquire competence in kinship semantics; and to determine the extent and manner in which the properties posited in formal models of adult kinship semantics are manifested in the course of acquisition.
Subjects: Approximately 50 children, ages 3 to 13, from each of four communities: (1) a small town in upstate New York; (2) an urban Puerto Rican community; (3) Hunza, Pakistan; and (4) a village in Maharashtra, India.
Methods: The investigation will contribute to an understanding of lexical acquisition and to a structural interpretation of socialization. Data will be obtained by participant observation (especially of children's play) and by interviews in which children will be asked to describe their relation to named persons. Interpretations of the data will be checked by controlled comparison.
Duration: September 1974-December 1976.
Cooperating group(s): National Science Foundation.

35-FB-1 THE INFLUENCE OF TELEVISION CONTENT ON THE DEVELOPMENT OF CHILDREN'S ATTITUDES ABOUT WOMEN'S ROLES

Investigator(s): Charles R. Bolz, Ph.D., Assistant Professor, Department of Educational Psychology, University of Texas, Sutton Hall 304, Austin, Texas 78712.
Purpose: To evaluate the nature of the influence of television content on the development of children's attitudes toward women's roles and toward the attributes women may legitimately possess, with specific focus on the stereotypic and diverse nature of the roles.
Subjects: Approximately 2,000 white, black, and Chicano children, ages 4 to 7 and 10 to 14, and their parents.
Methods: Subjects will be studied over a 3-year period. The first phase of the project is to collect baseline survey data on attitudes and television viewing behavior of children and their parents. Later phases of the study will involve showing children different kinds of commercials and programs to evaluate their effects.
Duration: September 1974-August 1977.
Cooperating group(s): Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.

35-FB-2 A COMPARATIVE STUDY OF HIGH SCHOOL EDUCATORS AND MEDICAL STUDENTS ON SEX KNOWLEDGE AND ATTITUDES

Investigator(s): Judith Janaro Fabian, Ph.D., Consulting Clinical Psychologist, Tamalpais High School, Camino Alto and Miller Avenue, Mill Valley, California 94941.
Purpose: To determine sexual knowledge and attitudes of professional groups which have a significant impact on the community either through a student body or patient population.
Subjects: 15 male and 11 female high school educators, ages 27 to 50 (teachers, counselors, administrators, nurses, and consultants).
Methods: Current levels of knowledge and sexual attitudes held by secondary level educators were ascertained prior to participation in a sex education workshop. Comparison will be made with data obtained from norms based on a medical student population identified by the Division of Family Study, Department of Psychiatry, School of Medicine, University of Pennsylvania. The instrument used for assessment was the Sex Knowledge and Attitude Test designed by Harold I. Lief, M.D. and Daniel M. Reed, Ph.D., 1970.
Findings: Comparison of knowledge scores did not demonstrate significant differences between high school educators and medical students. Further comparisons are planned on attitudinal measures of heterosexual relations, sexual myths, auto eroticism, and abortion.
Duration: Summer 1973-fall 1975.

35-FC-1 EDUCATIONAL AND OTHER CORRELATES OF CHILDREN'S DRUG USE

Investigator(s): Richard H. Blum, Ph.D., Director, Joint Program in Drug, Crime, and Community Studies, Center for Interdisciplinary Research, Stanford University, 197 Polya Hall, Stanford, California 94305.
Purpose: To identify patterns in children's development of drug use over a 2-year period; to identify correlates of these patterns; and to test whether or not educational intervention alters expected developmental drug use.
Subjects: 3,300 students in grades 2, 4, 6, 8, and 10 in four California towns.

Methods: Children in each grade cohort were randomly assigned to didactic, process and control of drug education. Before receiving drug education, children described their own drug use on a self-report that was examined for reliability and validity. Subjects were followed for 2 years; during this period, they received one or another mode of drug education.
Findings: Preliminary findings indicate that each mode of drug education has a different impact, and that intervention can decrease the stability and spread of drug use with maximal effects in elementary grades.
Duration: September 1971-August 1975.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare; San Carlos, Brisbane, and Sequoia School Districts, California; Drug Abuse Council, California.

35-FC-2 IDENTITY CHANGE IN A THERAPEUTIC COMMUNITY

Investigator(s): Barbara M. Artinian, Ph.D., Assistant Professor, School of Nursing, Center for the Health Sciences, University of California at Los Angeles, Los Angeles, California 90024.
Purpose: To study the process whereby a drug addict changes her identity to that of an ex-addict and finally to that of a *normal* person; and to study factors that serve to maintain or negate change when the girl re-enters society.
Subjects: 118 girls, ages 14 to 32, drug users, who were admitted to a religious drug rehabilitation program over a 3-year period, and remained longer than 16 days.
Methods: Participant observation and unstructured interviews were used initially to understand the setting. A follow-up study was done for all girls admitted to the program using interviews; mailed questionnaires; reports from family, friends, and staff; and organizational records. Data were analyzed by content analysis for the qualitative material and by frequency counts and cross-tabulations for the quantitative material.
Findings: Three patterns of response to the program were found: (1) rebellion and flight, (2) unstable conversions, and (3) successful identity change. The organization defined success as abstaining from unprescribed drugs and actively living for Christ. However, for evaluation of the graduates of the program, success was defined only as abstaining from unprescribed drugs. It was found that 66.7 percent of the graduates were drug free at the time the data were collected. Although the group of girls judged to be cooperative in the program was more successful than the group judged to be not committed or rebellious, the difference was not statistically significant. Factors correlated with success in the transition period were (1) voluntary admission to the program; (2) residence in the program during the first period when the organization was relatively informal and ex-addicts served as counselors; (3) discharge to a Christian institution or nondrug using home; (4) maintaining contact with a Christian organization or friend, ages 16 to 21, at the time of admission; and (5) use of drugs other than heroin.
Duration: September 1972-continuing.
Cooperating group(s): Division of Nursing, Bureau of Health Resources Development, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-FC-3 TEEN-AGE ALCOHOL ABUSE PREVENTION PROJECT

Investigator(s): Robert North, D.D.S., Project Director; Raymond Horton, Ph.D., Research Director; and Richard Orange, B.A., Training Director, Boys Harbor, Inc., 19 East 94th Street, New York, New York 10028.

Purpose: To use effective education and peer group process techniques to prevent alcohol abuse by adolescents.
Subjects: 2,000 junior and senior high school boys and girls, ages 14 to 18. The sample includes youth gangs and groups of dropouts, and the population is primarily black and Puerto Rican.
Methods: Students are selected to be peer group leaders by consensus of their group. Peer leaders are trained, over a period of 2 to 3 hours a week for 3 to 4 months, by Boys Harbor staff in group process, techniques, affective educational methods and information about alcohol. Once trained, the peer leaders conduct affective alcohol education sessions with their peers.
Duration: October 1974-September 1976.
Publications: Information is available from the investigators.

35-FE-1 THE EFFECT OF CHILDREN'S TELEVISION PROGRAMMING AND SENSORY OVERLOAD IN THE PRESCHOOL CHILD

Investigator(s): Thomas W. Miller, Ph.D., Associate Professor, Department of Psychology, Rosary Hill College, 4380 Main Street, Buffalo, New York 14226.
Purpose: To study visual sensory stimulation, auditory sensory stimulation, and verbal and nonverbal response patterns used in 45 selected television programs geared primarily for children.
Methods: The television response inventory (TVRI) was used to assess 45 separate television programs geared primarily for children over a 3-month period. Trained raters judged the television programs on four variables: visual stimulation, auditory stimulation, verbal response patterns, and nonverbal response patterns. Mean standard deviations and t-tests for differences were computed between television categories, including cartoons, live action, and educational programs.
Findings: Preliminary results indicate that educational programs use a lower level of auditory and visual stimuli and nonverbal response patterns than do animated cartoon features. The implications of sensory overload for the preschool child are related to Piagetian theory related to equilibration.
Duration: June 1974-May 1976.
Cooperating group(s): Child Development Center, Rosary Hill College.

35-FE-2 PRODUCT PACKAGING FOR CHILDREN: A LONGITUDINAL STUDY

Investigator(s): James U. McNeal, Ph.D., Professor, Department of Marketing, College of Business Administration, Texas A and M University, College Station, Texas 77843.
Purpose: To describe children's perceptions and problems experienced during interaction with packages associated with products for children.
Subjects: Two 4-year olds, one 9-year old, and two 10-year olds.
Methods: Children were observed interacting with packages containing and describing products used frequently by children; e.g., foods, toys, toiletries. Children's behavior and comments were recorded in a diary by the investigator over a 95-day period. Problems, ease of use, and perception of package graphics were noted.
Findings: By April 1975, 125 meaningful observations had been recorded. Tentative conclusions showed some classification of troublesome packages, misperception of package graphics, and special problems (e.g., opening, closure, spillage, spoilage, and potential harm).
Duration: December 1974-April 1975.

35-FE-3 DETERMINANTS OF PRESCHOOL CHILDREN'S ATTENTION TO TELEVISION

Investigator(s): Daniel R. Anderson, Ph.D., Assistant Professor, Department of Psychology, University of Massachusetts, Amherst, Massachusetts 01002.

Purpose: To examine the development of children's attention to television; and to ascertain what aspects of television programs attract and maintain children's attention.

Subjects: 35 boys and 35 girls, ages 1 to 4, from predominantly white middle and upper middle class homes with an average of 1.4 television sets.

Methods: Subjects were videotaped while viewing a 57-minute Sesame Street program consisting of 41 segments, 10 to 453 seconds long. Subjects' attention and attributes of the television program were rated and stored in a computer, so that continuous information about the program could be related to continuous information about attention. Program attributes rated included adult male, adult female, and child characters; eye contact; body parts; music; auditory techniques; graphics; camera techniques; nonhuman characters; inanimate objects; and activities. Subjects' parents filled out a home television viewing questionnaire.

Findings: There was a significant increase with age in the percent of attention to television related to both an increase in frequency and duration of fixations. Attention was elevated in the presence of adult female characters, child characters, eye contact, puppets, animation, peculiar voices, active movement, dancing, singing, lively music, rhyming, repetition, alliteration, sound effects, auditory changes, letters and script, scene changes, and reverse motion. Attention was depressed in the presence of adult male characters, animals, inactivity, still drawings, and long program segments. There were age and attribute interactions for many of the attributes, but there were very few sex effects.

Duration: March 1973-August 1975.

Cooperating group(s): National Science Foundation.

SPECIAL GROUPS OF CHILDREN

Physically Handicapped

35-GA-1 THE ORGANIZATIONAL MANAGEMENT OF THE YOUNG HANDICAPPED

Investigator(s): Alan Davis, B.A., Research Officer; and Philip Strong, M.A., Research Officer, MRC Medical Sociology Research Unit, Center for Social Studies, University of Aberdeen, Westburn Road, Aberdeen AB9 2ZE Scotland.
Purpose: To study the organizational management of young handicapped children in various medical contexts.
Subjects: Several hundred preschool boys and girls undergoing developmental assessment; or, if found to be physically or mentally handicapped, undergoing management and treatment. Approximately 70 children will be selected from the original sample for in-depth study.
Methods: Children will be observed in various medical settings including pediatric general medical clinics, a pediatric neurological clinic, authority screening clinics, maternity hospitals, nursery wards, a nursery follow-up clinic, and a center for assessment and management of young handicapped children. Interviews will be conducted with staff and parents. A comparative analysis of services in a children's hospital in the United States is planned.
Duration: September 1971-September 1975.
Cooperating group(s): Social Science Research Committee, United Kingdom.

35-GA-2 AN ANALYSIS OF CRIPPLED CHILDREN'S PROGRAMS

Investigator(s): Baruni Samal, M.D., Assistant Professor; and Roger White, Dr.P.H., Assistant Professor, School of Hygiene and Public Health, Johns Hopkins University, Stebbins Building, Room 1511, 615 North Wolfe Street, Baltimore, Maryland 21205.
Purpose: To identify and explicate the existent data retrieval system of a prototype crippled children's program in order to provide a descriptive analysis of the total scope of services provided by the program.
Subjects: Phase I: Children born from 1969 to 1971 who have a congenital facial cleft condition and who were residents of Maryland from 1969 to 1974 and were clinically eligible for crippled children's services. Phase II: All children, ages 0 to 20, who have a facial cleft and have been known to Maryland's Crippled Children's Program from birth.
Methods: The types of patient care services received by children enrolled in the Maryland Crippled Children's Program will be documented from intake to discharge, covering a maximum of 20 years. Children who are not enrolled in the program initially, though clinically eligible, will be identified. Two phases are planned, each utilizing a different data collection approach, to study patient characteristics and their flow through two forms of health care delivery systems. Phase I will follow the 3-year birth cohort through the program and private health care delivery

systems. This phase will search records from multiple sources (e.g., vital statistics, speciality hospitals, birth records, a private practitioner survey, and various record linkages) to enumerate actual incidence of cleft palate versus presumed incidence. Phase II will utilize records searches of cases known to the Maryland Crippled Children's Service to ascertain data on type of cleft and the sociodemographic and service process involved in beginning, continuing, and terminating services.

Duration: January 1975-December 1976.

Cooperating group(s): Division of Research, Maternal and Child Health Service, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-GD-1 CLINICAL AND BIOCHEMICAL CORRELATIONS IN ASTHMA

Investigator(s): Elliott Middleton, Jr., M.D., Director, Clinical Services and Research, National Asthma Center, 1999 Julian Street, Denver, Colorado 80204.

Purpose: To study possible biochemical abnormalities that characterize the syndrome of asthma.

Subjects: Approximately 125 boys and girls, ages 6 to 16, who have chronic asthma.

Methods: Peripheral blood leukocytes were assayed for the activity of several enzyme systems (adenylate cyclase, ATPase and phosphodiesterase), and the results were compared with a number of clinical factors, including pulmonary functions. The results were analyzed by a newly developed and very flexible computer program and subjected to statistical analysis.

Findings: Preliminary findings indicate no clear-cut relationship between abnormal enzyme function and clinical features has been detected to date (May 1975), but there are subjects whose enzyme activity is influenced by drug therapy.

Duration: June 1971-May 1976.

Publications: (1) Sherman, N. A.; Smith, R. S.; and Middleton, E., Jr. Comparison of immunoglobulin formation *in vitro* by leukocytes of normal donors and steroid- and nonsteroid-treated asthmatic patients. *Journal of Allergy and Clinical Immunology*, 1974, 54, 77. (2) Coffey, R. G. and Middleton, E., Jr. Effects of glucocorticosteroids in the urinary excretion of cyclic AMP and electrolytes by asthmatic children. *Journal of Allergy and Clinical Immunology*, 1974, 54, 41.

35-GE-1 THE SYMPTOMATIC TREATMENT OF ASTHMA BY RELAXATION

Investigator(s): A. Barney Alexander, Ph.D., Research Psychologist, Behavior Science Division, Psychophyorotogical Laboratory, Children's Asthma Research Institute and Hospital, National Asthma Center, 1999 Julian Street, Denver, Colorado 80204.

Purpose: To replicate previous findings that profound relaxation has an immediate benefical effect upon the peak expiratory flow rates of many asthmatic children; and to investigate thoroughly the effectiveness of relaxation as a symptomatic treatment for asthma attacks in children.

Subjects: 20 to 30 boys and girls, ages 6 to 16, who are moderate to severe child asthmatics and are spending 1 to 2 years in residential rehabilitation at the National Asthma Center.

Methods: The effectiveness of profound relaxation will be studied both while children are

relatively asymptomatic and during naturally occurring asthma attacks. Relaxation will be taught by the most effective training methods available, including quantification of the relaxed state by electromyography and biofeedback technology. Pulmonary functional variables (lung volumes, flow rates, and airway resistance) will be assessed before and after all sessions. Flow volume curves and tests of gas distribution and closing volumes will be used to examine pulmonary changes; e.g., Are small or large airways or both involved? In addition, the effects of relaxation training on the overall clinical status of the children will be assessed by the evaluation of each child's ongoing medical care requirements. In order to understand the differences between children who respond favorably to relaxation and those who do not benefit, several individual difference variables will be investigated, including the presence of emotional asthma precipitants and the degree of reversibility of bronchospasm attainable with isoproterenol. The relationship between amount of beneficial pulmonary response and depth of relaxation attained, and factors influencing attainment of relaxation while experiencing asthma will also be explored. The effectiveness of relaxation as a symtomatic treatment for asthma attacks will be compared with treatment by inhaled isoproterenol.

Duration: September 1973-August 1976.

Cooperating group(s): National Heart and Lung Institute, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-GE-2 AUGMENTED SENSORY FEEDBACK THERAPY FOR CHILDREN WITH CEREBRAL PALSY

Investigator(s): Richard Herman, M.D.; Project Director; and Carol Leiper, B.P.T., Physical Therapist, Krusen Research and Engineering Center, Moss Rehabilitation Hospital, 12th Street and Tabor Road, Philadelphia, Pennsylvania 19141.

Purpose: To demonstrate the efficacy of augmented sensory feedback therapy as a mode of treatment for cerebral palsied children, focusing initially on the development of head and trunk control.

Subjects: Cerebral palsied children, ages 1 to 5, with a quadriparetic disability and demonstrating impaired control of head movement and positioning.

Methods: Half of the sample will utilize biofeedback equipment during their treatment session, while the other half will undergo similar treatment without auditory feedback. During alternating periods of feedback and no feedback application, each child will function as his or her own control. Baseline performances will be recorded prior to, during, and at the conclusion of the treatment sessions. Four behaviors are selected for modification: head control, trunk control, sitting, and standing balance. To judge the efficacy of biofeedback therapy, instrumentation will be developed for (1) objective measurement and recording of head movements, (2) provision of a proportional auditory signal related to head position, and (3) provision of a triggering system for activation of response contingent toys dependent upon head position. Data will also be collected on graded performance of functional activities and motor development progression.

Duration: October 1974-October 1977.

Cooperating group(s): United Cerebral Palsy Association Research and Education; United Cerebral Palsy Center of Philadelphia.

35-GE-3 CONGENITAL HAND DEFORMITIES

Investigator(s): Adrian E. Flatt, M.D., Director, Division of Hand Surgery, University Hospitals, University of Iowa, Iowa City, Iowa 52242.

Purpose: To study over the long term the restoration of hand function by surgical repair.
Subjects: 1,400 children, ages 0 to adult, with congenital hand anomalies.
Methods: Studies have been conducted on skin cover and thumb motion, club hand, congenital absence of the ulna, polydactyly, syndactyly, acrosyndactyly, Apert's syndrome, and macrodactyly. Information was collected and conclusions were drawn on prognosis and factors involved in prognosis, indications for surgery, related pathologies, and the role of heredity, and general surgical principles. Present studies involve follow-up of the growing hands of patients and assessment of the influence of factors such as inherent growth aberrations, developing motor control and dexterity, the type of surgery performed, the timing of surgical procedures, and whether or not surgery can yield a predictable increase in function. In order to compare children treated surgically with normal children, norms are being established for elementary school children's hand strength and measurements, taking into account age, sex, hand dominance, and ethnic group variables.
Findings: As a result of long-term follow-up studies, significant improvements have been made in surgical treatments.
Duration: 1966-continuing.
Cooperating group(s): College of Medicine, University of Iowa.
Publications: (1) Burmeister, L. F.; Flatt, A. E.; and Weiss, M. W. *Size and strength development of the hand in elementary school children.* Iowa City: Iowa State Services for Crippled Children, University of Iowa, 1974. (2) Flatt, A. E. and MacQueen, J. C. *Congenital anomalies of the hand: A clinical research study, July 1966-July 1972.* Maternal and Child Health Services Final Report, Grant No. C-146, 1972.

35-GE-4 THE DEVELOPMENT OF A STANDARDIZED TEST FOR THE ASSESSMENT OF SYNTACTIC STRUCTURES IN THE LANGUAGE OF DEAF STUDENTS

Investigator(s): Stephen P. Quigley, Ph.D., Acting Director; and Marjorie W. Steinkamp, Ph.D., Specialist in Education, Institute for Research on Exceptional Children, University of Illinois, 43 Children's Research Center, 51 Gerty Drive, Champaign, Illinois 61820.
Purpose: To prepare for classroom teachers' use a battery of 22 standardized tests with a diagnostic orientation and patterned around the linguistic peculiarities of deaf children.
Subjects: Pilot sample: Prelingually deaf children, ages 10 to 18, from the Illinois School for the Deaf and the Indiana School for the Deaf. Standardization sample: 450 prelingually deaf children, ages 10 to 18, randomly sampled from day and residential schools from all geographic regions.
Methods: Pilot testing of valid, diagnostically-oriented multiple choice items will yield data to allow for the psychometrically optimal selection of items for 22 tests with a reliability of .95 and appropriate difficulties. A test manual will accompany the battery. Teachers' manuals will aid the teacher in evaluating mastery of syntactic material and in setting guidelines for improved classroom instruction.
Findings: Data have been gathered through pilot testing for three of the 22 subtests. Items for another 10 subtests have been prepared.
Duration: September 1974-continuing.
Cooperating group(s): Illinois School for the Deaf, Jacksonville, Illinois; Indiana School for the Deaf, Indianapolis, Indiana.

35-GE-5 BIOMECHANICAL ASSESSMENT OF THE DISABLED CHILD

Investigator(s): George V. B. Cochran, M.D., Director, Biomechanics Research Unit, Helen Hayes Hospital, West Haverstraw, New York 10993.
Purpose: To establish objective, functional, neuromuscular, and cardiorespiratory assessment (vs. subjective clinical examination) of disabled children, in order to improve the results of medical, surgical, and physical rehabilitation services; and to develop and operate a Physical Performance Evaluation Unit to monitor the physical status of patients at intervals throughout their entire rehabilitation period.
Subjects: Approximately 100 in- and outpatients of Helen Hayes Hospital annually, boys and girls, ages 13 to 18, with physical disabilities. Patients include children with cerebral palsy, meningomyelocoele, scoliosis, congenital dislocation of the hip, and other common musculoskeletal disabilities in children requiring long-term treatment and rehabilitation.
Methods: Patients will be studied with special instrumentation while walking on a level walkway, treadmills, and/or performing at an upper extremity evaluation station. Kinematic data from film and videotape will be correlated with telemetered electromechanical data, including EMG, foot-contact sequence, force, pressure, accelerometer, and goiometer measurements relevant to the specific disability. Oxygen uptake and respiratory parameters during specific tasks also will be determined as indices of rehabilitation progress. Patients are primarily their own controls as progress is monitored against each patient's past performance. Standard protocols will be designed to fit each disability group, so that an individual's progress can be compared to that of similar patients. The project is intended to help establish indications for the most effective treatment for each disability, monitor patient progress, and evaluate new approaches to rehabilitation of specific disabilities.
Duration: 1976-1979.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-GE-6 AN ASSESSMENT OF THE BENEFITS OF FOLIC ACID THERAPY IN CHILDREN WITH SICKLE CELL ANEMIA

Investigator(s): Olu O. Ogunye, M.D., Assistant Professor, Department of Pediatrics and Child Health, Center for Sickle Cell Disease, College of Medicine, Howard University, 520 W. Street, N.W, Washington, D. C. 20059.
Purpose: To determine if long-term folic acid therapy will cause increased growth and development in sickle cell anemia patients.
Subjects: 40 boys and girls, ages 5 to 17, who have sickle cell anemia.
Methods: The object of the research is to have some patients on folic acid and some on placebo, in order to demonstrate better growth rates in the children treated. Height, weight, hemoglobin level, and degree of pubertal changes are recorded at each clinical visit. Serum folate level is also measured.
Duration: April 1975-December 1975.
Cooperating group(s): General Research Support Branch, Division of Research Resources, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-GE-7 REFERENTIAL COMMUNICATION IN DEAF AND HEARING CHILDREN

Investigator(s): Harry W. Hoemann, Ph.D., Associate Professor; and Ryan D. Tweney, Ph.D., Assistant Professor, Psychology Department, Bowling Green State University, Bowling Green, Ohio 43403.

Purpose: To evaluate the quality and accuracy of peer to peer communicating in deaf and hearing children, comparing communication in a visual mode in deaf children with communication in an auditory mode in hearing children.

Subjects: Deaf subjects are typically drawn from populations of residential or day schools for deaf children, with a special interest in children born profoundly deaf. Hearing subjects are tested from similar social and economic classes, within comparable ranges of intelligence and school age.

Methods: Subjects are tested in pairs. One child is required to describe a referent, so that another child can identify it within an array. Referents are generally pictured, with a range of complexity included; e.g., pictures of common objects; items with attributes of number, size, color, and form; and items in a series.

Findings: Deaf children manifest a developmental lag in performance on referential communication tasks, even when they use manual methods. On the other hand, their messages reveal a rich exercise of the symbolic function, and with a small amount of training, performance scores improve significantly.

Duration: September 1970-April 1976.

Cooperating group(s): National Institute of Neurological Disease and Stroke, National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-GF-1 EFFECT OF PARENT TRAINING ON LEARNING AND COGNITION OF DEAF CHILDREN

Investigator(s): Rosslyn Gaines, Ph.D., Associate Professor, Department of Psychiatry, C8-698, NPI, University of California at Los Angeles, Los Angeles, California 90024.

Purpose: To develop two modes of parent training; and to measure the effectiveness of each of the training sessions by making the child the target of pre-, post-, and follow-up studies.

Subjects: 60 congenitally and severely deaf boys and girls, ages 6 to 9.11; and their parents. The children have no major secondary anomalies, have normal IQs, but are not doing well in school or at home compared with their peers.

Methods: Parents of three groups of children receive one of two types of parent training or are placed in the control group. Parent training lasts for 90 hours. The first mode of parent training focuses on the parents' intra- and interpersonal needs and feelings and on childrearing methods. The second mode focuses on understanding the child's needs and childrearing methods. The follow-up on children's functioning will occur one school year after parent training terminates. Pre-, post-, and follow-up test measures focus on three areas of the child's functioning: (1) cognitive and perceptual development measured by individual tests, (2) school performance assessed by academic performance and timed observations of classroom behavior, and (3) videotape samplings of natural and structured parent-child interactions. Children's performance will be compared between modes of parent training and compared with the performance of the control group.

Duration: May 1974-April 1978.

Mentally Retarded

35-HB-1 CYTOGENETIC STUDIES IN MENTAL RETARDATION

Investigator(s): W. R. Breg, M.D., Clinical Professor of Human Genetics and Pediatrics, Yale University, New Haven, Connecticut 06520; and O. J. Miller, M.D., Professor of Human Genetics and Development, Columbia University, New York, New York 10027. Address correspondence to: W. R. Breg, M.D., Southbury Training School, Southbury, Connecticut 06488.

Purpose: To delineate syndromes associated with chromosomal abnormalities and define the causes of the chromosomal defect.

Subjects: Mentally retarded persons of any age.

Methods: Chromosomes of persons with mental retardation are being studied; comparison is with series of newborn and occasional general population surveys recorded by others.

Findings: Among institutionalized mentally retarded groups, 12 to 14 percent have Down's syndrome (trisomy 21), one percent have sex chromosome abnormalities, and one-half percent have various other abnormalities.

Duration: 1960-1976.

Publications: (1) Fineman, R. M. *et al.* Trisomy 8 mosaicism syndrome. *Pediatrics* (in press). (2) Halloran, K. H.; Breg, W. R.; and Mahoney, M. J. 21 monosomy in a retarded female infant. *Journal of Medical Genetics,* 1974, 11, 386. (3) Breg, W. R. Updating advances in cytogenetics: Applications of the new chromosome banding methods. *Proceedings of the Boston Conference on Birth Defects, Original Article Series,* 1974, 10, 7.

35-HC-1 LEVELS OF IMPAIRMENT OF SENSORIMOTOR FUNCTIONS IN CHILDREN WITH EARLY BRAIN DAMAGE

Investigator(s): Rita G. Rudel, Ph.D., Associate Clinical Professor, Neurological Institute, College of Physicians and Surgeons, Columbia University, New York, New York 10032; H.-L. Teuber, Ph.D., Professor, Department of Psychology and Brain Research, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139; and Thomas E. Twitchell, M.D., Neurologist, New England Medical Center Hospital, 171 Harrison Avenue, Boston, Massachusetts 02111.

Purpose: To determine whether the effect of early brain damage can be described in some groups of children by the following statements: (1) Certain simple sensory tasks seem less impaired than with injuries sustained in adulthood, while performance in certain complex perceptual tasks seems proportionately more affected after early cerebral damage. (2) The perceptual defects observed after early brain damage in children might have some preferential association with certain symptoms in the motor system. (3) Symptoms of left or right damage to the brain would show an attenuated form of the adult pattern.

Subjects: Experimental group: 43 boys and 20 girls, ages 7.2 to 18.5, with very early brain damage, who are ambulatory, educable (although some subjects had IQs usually considered to preclude schooling), and reasonably dexterous in both hands. Control group: normal children at grade level in achievement and having IQs of 90 to 110. Children with suspected learning deficits were eliminated from the control group.

Methods: Each subject was tested alone with 11 of the Wechsler Intelligence Scale for Children (WISC) subtests, consisting of six verbal subtests (including digit span) and five performance subtests. Each subject also received a standard neurological examination, including assessment of function of all cranial nerves, muscle strength and tone, reflex status, gross observations of posture and gait, clinical tests of sensation by cotton wisp, pin, passive movement of joints, and vibration. The examination was supplemented by more detailed tests. In addition, quantitative somatosensory tests, a test of body scheme, a test of spatial orientation, and cross-modal transfer tests were used. For each of the special tests, excluding the neurological examinations and the WISC, a developmental study with control subjects was completed. An effort was made to test the specified performance across the broadest range of ages possible, beginning at age 3.
Findings: Early damage seemed to spare elementary sensory functions while motor impairment was conspicuous, particularly impairment of the oculomotor system. Oculomotor system impairment correlated with deficient performance on spatial tasks. Performance on a variety of verbal and nonverbal tasks correlated with lateralization of symptoms in the brain damaged group; a reciprocal pattern emerged depending upon whether the right or left side of the body was predominantly involved. The results suggest that the adult pattern of hemispheric specialization antedates birth and that damage which does not encroach directly on the language zones leaves that pattern intact if somewhat attenuated, particularly in the case of left hemisphere functions. Of the 63 experimental subjects, only 12 had right-sided (left hemisphere) neurological signs and only three of these were dysphasic. This inequality of lateralizing signs could reflect a sampling bias (i.e., children with right-sided signs may be more language impaired and less educable) or some greater invulnerability of the left hemisphere to early damage.
Duration: 1970-completed.
Cooperating group(s): Robinson Ophthalmic and Dyslexia Fund.
Publications: Rudel, R. G.; Teuber, H.-L.; and Twitchell, T. E. Levels of impairment of sensorimotor functions in children with early brain damage. *Neuropsychologia,* 1974, 12, 95-108.

35-HC-2 ORGANIZATION AND MEMORY IN CHILDREN

Investigator(s): Laraine Masters Glidden, Ph.D., Assistant Professor, Research and Demonstration Center, Box 89, Teachers College, Columbia University, New York, New York 10027.
Purpose: To study organizational processes in memory used by retarded children and adolescents; and to assess possible deficits in memory functioning as a result of deficits in organizational strategies.
Subjects: 300 educable mentally retarded adolescents, boys and girls, ages 12 to 19, enrolled in special education classes in the New York City and New Jersey public schools.
Methods: The primary methodology was a free recall task of multiple trials. Subjects were tested individually with words or pictures presented either visually, aurally, or in combined modes. Independent variables under consideration were (1) blocking words together, (2) instructions to organize, (3) retention interval, (4) serial position, and (5) relatedness of stimulus items. Analysis of variance, analysis of covariance, and correlational techniques were employed.
Findings: Preliminary findings show improved recall with blocking when the blocked words are related, but inconsistent improvement when the blocked words are unrelated. Blocking increases and extends the recency effect in the serial position curve.
Duration: June 1974-May 1975.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare; New York City Bureau for Children with Retarded Mental Development; New York City Public Schools; New Jersey Public Schools.

35-HG-1 TREATMENT OF DOWN'S SYNDROME CHILDREN WITH THE "U" SERIES M.D.

Investigator(s): Makoto Iida, M.D., Division of Mental Deficiency Research, National Institute of Mental Health, 1-7-3 Koonodai, Ichikawa City, Chiba-Ken, Japan; and Ichiko Kurita, M.D., Department of Pediatrics, National Hospital, Monodae, Japan.
Purpose: To study the effects of treatment with the medicine M.D., modified Turkel's "U" series, on children with Down's syndrome.
Subjects: 31 boys and 21 girls with Down's syndrome.
Methods: Subjects were treated for 1½ to 2 years with the "U" series M.D. and effects on their mental development were observed. Abilities measured included (1) coordination of body movements, (2) search for designated objects, (3) social interaction, (4) proper ingestion and normal elimination, (5) development of useful daily habits, and (6) comprehension and use of language. Cases in which the developmental quotient (DQ) increased 10 or more points were considered effective and other cases were considered ineffective. Side effects of the medicine were noted.
Findings: Twelve boys (39 percent) and 14 girls (67 percent) showed an increase in mental growth of more than 10 points; 12 boys (35 percent) and 4 girls (19 percent) showed a decrease; and 7 boys (26 percent) and 3 girls (14 percent) were stable. Fifty percent of the children improved with M.D. The expected effects were not observed in 1- and 2-year-old children treated by M.D., but their ability of search and operation, eating ability, and life habits were developed. The seven children not on the M.D. series did not show increased mental growth. In testing for side effects of the medicine, no abnormal signs were observed on the erythrocytes, leukocytes, serum GOT, GPT and alkalien-phosphatase, urine albumin, and glucose.
Duration: 1964-completed.

35-HG-2 DEVELOPMENTAL TRENDS IN DOWN'S SYNDROME MEASURED BY VISUAL, AUDITORY, AND SOMATOSENSORY EVOKED RESPONSES

Investigator(s): Robert Dustman, Ph.D., Research Psychologist; D. A. Callner, Ph.D., Research Assistant; and E. C. Beck, Ph.D., Research Psychologist, Veterans Administration Hospital, Room GO-36, Building 2, 500 Foothill Drive, Salt Lake City, Utah 84113.
Purpose: To study the accelerated aging processes that have been reported for Down's syndrome subjects, particularly as they relate to the electrical activity of the brain.
Subjects: Experimental group: 33 males and 33 females, ages 4 to 62, with Down's syndrome. Control group: 66 normal persons matched on age and sex.
Methods: Brain responses elicited by flash, click, and shock stimuli and spontaneous brain waves were studied. Amplitude and latencies of wave components of brain responses were analyzed. Brain frequencies were studied with power spectral analysis techniques.
Findings: The brain responses of the Down's syndrome and normal control groups differed in ways which suggest that inhibitory processes in the Down's brain are not functioning properly.
Duration: July 1974-September 1975.
Cooperating group(s): University of Utah, College of Medicine, Department of Neurology.

35-HH-1 FAMILY LIFE CURRICULUM WITH SEX EDUCATION COMPONENTS

Investigator(s): Sue Hamre-Nietupski, M.S., Teacher; and Wes Williams, Ph.D., Madison Public Schools, 501 East Badger Road, Madison, Wisconsin 53713.

Purpose: To develop a family life curriculum; and to teach severely mentally and physically handicapped students body concepts, self-care skills, family living concepts, social interaction skills, and sex information.
Subjects: Two male and five female severely physically and mentally handicapped students, ages 12 to 17, functioning at the trainable retarded level.
Methods: Task analyses of each curriculum area were delineated. Baseline rates of student performance were obtained in each area. Continuous data were collected while the students were taught the target skills in addition to the collection of posttest data to assess skill acquisition and generalization.
Findings: Students learned to discriminate and label their body parts, including genitals; and to label family members. They also learned self-care skills (e.g., use of mouthwash; a menstrual routine). Students are progressing through higher level skills.
Duration: Spring 1974-continuing.
Cooperating group(s): Department of Behavioral Disabilities, University of Wisconsin.
Publications: Hamre-Nietupski, S. and Williams, W. Family life curriculum with sex education components. In L. Brown *et al., A collection of papers and programs related to public school services for severely handicapped students.* Madison, Wisconsin: Madison Public Schools, August 1974. Pp. 415-506.

35-HH-2 INVESTIGATION OF THE EFFECT OF SENSORIMOTOR TRAINING ON LANGUAGE DEVELOPMENT OF PRESCHOOL RETARDED CHILDREN

Investigator(s): Patricia C. Pothier, R.N., M.S., Associate Professor, Department of Mental Health and Community Nursing, School of Nursing; and Delmont Morrison, Ph.D., Associate Clinical Professor, Department of Psychiatry, University of California at San Francisco, San Francisco, California 94122.
Purpose: To replicate a previous study in which the effectiveness of a remedial program of sensorimotor training based on individual prescriptions derived from assessments of sensorimotor development was compared with a remedial motor program employing similar training methods without reference to developmental assessment; and to refine language assessment data collection.
Subjects: 20 randomly selected developmentally disabled preschool children (10 boys and 10 girls). Children with physical handicaps that would impair their sensorimotor coordination, such as uncorrected loss of vision, were excluded from the sample.
Methods: Subjects were divided into an experimental group which received sensorimotor treatment and a control group which received gross motor activities. In the original study being replicated, mentally retarded preschool children participated 5 days a week for 6 months in programs including (1) randomly selected activities with social attention, (2) social reinforcement for casually selected gross-motor activities, and (3) social reinforcement for gross-motor activities prescribed from a developmental assessment of sensorimotor deficiencies. Effects of social attention and reinforcement for attending to, attempting, and performing gross-motor tasks were controlled. While participating in the experimental procedures, all subjects remained in the usual nursery school program. Subjects were pre- and posttested with the Denver Developmental Screening Test to measure growth in gross-motor, language, and personal social development.
Findings: Original study: The sensorimotor training group demonstrated significantly greater gain scores in overall, gross-motor, and language development than did the gross-motor and attention training groups.
Duration: October 1973-December 1975.

Cooperating group(s): St. Vincent DePaul Developmental Day Care Center.
Publications: Morrison, D. and Pothier, P. Two different remedial motor training programs and the development of mentally retarded pre-schoolers. *American Journal of Mental Deficiency*, 1972, 77(3), 251-258.

35-HH-3 EMR PROGRAM DEVELOPMENT: ESEA TITLE III PROJECT

Investigator(s): Thomas Noffsinger, Ph.D., Director, EMR Program Development, 7090 Hopkins Road, Mentor, Ohio 44060; James Hough, Ph.D., Professor, Curriculum and Foundation, Ohio State University, Columbus, Ohio 43210; and John Powers, M.A., Director, Center for Improved Education, Battelle Memorial Research Institute, 505 King Avenue, Columbus, Ohio 43201.
Purpose: To develop and field test (1) curriculum for educable mentally retarded (EMR) students; (2) inservice teacher training packages; (3) computer information retrieval information system for child learning and teacher learning; and (4) to evaluate and describe student performance in four program models for EMR students: self-contained, selected academic placement, learning center, and total mainstreaming.
Subjects: Experimental group: 110 classes of EMR students in urban, rural, and suburban areas of Ohio from the primary through the senior high level; and 25 classes in each of the four program models. Control group: 25 classes of EMR students not involved in the project.
Methods: Students have been pre- and posttested over a 3-year period on an achievement instrument designed to test student performance in the Persisting Life Problems Curriculum (created for the project). In addition, the Metropolitan Achievement Test has been used. Students in each of the models have been tested with self-concept skills and attitude scales, including the Barclay Classroom Climate Inventory, the Meyerowitz Scale, and the Self Attitude Scale. The Multi-Dimensional Attitude Scale of Mental Retardation has been administered to classroom teachers, special education teachers, psychologists, building principals, and nonclassified personnel related to each of the program models. Cost data on each of the models have been collected and have been analyzed relative to the classroom achievement of each of the model types.
Findings: Preliminary tentative findings indicate that there is a direct relationship cost to integrating students and to integration and student achievement, and that there is a direct relationship between student self-concept and classroom models.
Duration: February 1970-August 1975.
Cooperating group(s): Ohio Division of Special Education; Battelle Memorial Research Institute, Center for Improved Education; Mentor Exempted Village School District Public Schools; over 300 school districts in the State of Ohio.
Publications: Reports are available from the Mentor Exempted Village School District, Garfield Elementary School, Mentor, Ohio 44060.

35-HH-4 THE USE OF BEHAVIOR MODIFICATION FOR REMEDIAL TRAINING OF THE NONAMBULANT RETARDED CHILD

Investigator(s): J. Hogg, Ph.D., Senior Lecturer; R. Remington, Ph.D., Research Fellow; and F. Foxen, B.Sc., Research Fellow, Hester Adrian Research Centre, University of Manchester, Manchester M13 9PL, England.

Purpose: To study the assessment of profoundly retarded nonambulant children; and to develop structured behavioral intervention programs.

Subjects: Nonambulant, profoundly retarded children.

Methods: Small groups (N = 2 to 6) or single subject (N = 1) designs are employed. Data are collected by videotape analysis, cumulative counters, cumulative recorders, and multichannel pen recorders. The main sources of the methodology are the experimental analysis of behavior and development psychology. Teacher and nurse training programs are projected.

Findings: Sensory reinforcers (auditory and vibratory) are effective in establishing simple behaviors in the sample. Classical conditioning provides a potential technique for sensory assessment. Developmental assessments (Bayley Scales of Infant Development and Uzgiris-Hunt Scales) provide a context for intervention in the light of clear educational objectives.

Duration: October 1972-September 1975.

35-HJ-1 THE USE OF NONPARAMETRIC METHODS OF MULTIVARIATE ANALYSIS TO EVALUATE ADAPTIVE BEHAVIORS IN THE RETARDED

Investigator(s): Earl E. Balthazar, Ph.D., Director, Behavioral Science Research; E. M. Naor, M.A., Research Analyst, Behavioral Science Research; and R. M. Sindberg, Ph.D., Director, Research Department, Central Wisconsin Colony and Training School, 317 Knutson Drive, Madison, Wisconsin 53704; and W. W. Davis, M.A., Graduate Student, Department of Statistics, University of Wisconsin, Madison, Wisconsin 53706.

Purpose: To describe two statistical techniques appropriate to use to evaluate behavioral frequencies observed among emotionally and behaviorally disturbed, severely and profoundly retarded children in order to demonstrate specific, effective, and appropriate procedures to assess program outcomes.

Subjects: 28 severely and profoundly retarded children, ages 3 to 10, selected by nursing personnel from an institutional population on the basis of their self-destructive behavior, difficulties in general nursing care, degree of emotional disturbance, and severe behavior problems. The subjects are divided into an experimental group of 12 randomly chosen subjects (8 boys and 4 girls) and a control group (11 boys and 5 girls).

Methods: Experimental subjects were transferred to an experimental unit for systematic external stimulation and nurturant nursing care. The experimental unit was characterized by a supportive, homelike milieu, maximal opportunities for novel experiences and exploration, and the use of reinforcement theory principles and response extinction procedures to build repertories of desirable behaviors. Baseline observations of subjects derived from the Balthazar Scales of Adaptive Behavior, Section II (BSAB-II) were recorded before initiation of the experimental program and at regular 3-month intervals afterwards. Initial findings of the project were re-evaluated, based on conventional univariate analyses to test for differential treatment effects between experimental and control groups on seven factors representing rudimentary types of social coping behaviors. Nonparametric multivariate techniques were preferred because (1) the sample was small; (2) data were discrete and not amenable to successful transformation; and (3) for many behaviors, distributions were J-shaped with large numbers of undistributed zero scores. A multivariate extension of the Kruskal-Wallis statistic was used to test the hypothesis that the baseline group profiles of the experimental and control groups do not differ more than would be expected because of chance fluctuation in scores (one-way layout with multivariate observations). A multivariate extension of the Friedman two-way analysis of variance by ranks was used to test the hypothesis that several observations of the subjects are equivalent (multivariate, two-way ANOVA data situation).

Findings: The program was effective in changing the social coping behaviors of severely retarded and emotionally disturbed children. The investigators concluded that recent and continuing advances in nonparametric theory and methodology have made possible the legitimate application of more sophisticated methods of analysis to frequency data. The astute use of nonparametric techniques in conjunction with quantitative measures of behavior extends the usefulness and flexibility of paradigms for program evaluation.

Duration: 1973-completed.

Cooperating group(s): Madison Academic Computing Center, University of Wisconsin, Madison, Wisconsin; Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: (1) Balthazar, E. E.; Naor, E. M.; and Sindberg, R. M. *The absence of intervention training programs: Effects upon the severely and profoundly retarded. Part I: Selected cases of emotional and behavioral disturbance.* Madison: Central Wisconsin Colony and Training School Research Department, 1973 (ERIC Document Reproduction Service No. ED 087 150). (2) Balthazar, E. E. Residential programs in adaptive behavior for the emotionally disturbed more severely retarded. *Mental Retardation,* 1972, 10(3), 10-13. (3) Balthazar, E. E.; English, G. E.; and Sindberg, R. M. Behavior changes in mentally retarded children following the initiation of an experimental nursing program. *Nursing Research,* 1971, 20(1), 69-74. Reprints and related materials are available from E. E. Balthazar.

Gifted

35-IA-1 PERSONALITY CHARACTERISTICS OF CREATIVITY AND INTELLIGENCE

Investigator(s): George S. Welsh, Ph.D., Professor, Department of Psychology, University of North Carolina, Davie Hall, Chapel Hill, North Carolina 27514.

Purpose: To study the relationship between intelligence and creativity in highly gifted and talented adolescents; and to develop noncognitive scales to identify creative and intelligent persons.

Subjects: 1,163 adolescents who are gifted and talented in academic and artistic areas, and who attend a special residential summer program in North Carolina.

Methods: Intelligence was defined by scores on Terman's Concept Mastery Test (CMT), and creative potential was defined by scores on the Revised Art Scale (RA) of the Welsh Figure Preference Test, a nonverbal personality instrument. These two tests are statistically independent since CMT and RA scores have proven to be uncorrelated for a variety of adult and college student samples. Subjects' test scores were plotted on two orthogonal axes, and four groups of subjects were selected whose scores fell in the corners of the bivariate display: (1) high on RA, low on CMT; (2) low on both RA and CMT; (3) high on both RA and CMT; and (4) low on RA, high on CMT. Personality characteristics differentiating the four groups were inferred from an item analysis of three standard tests, the Adjective Check List (ACL), Minnesota Multiphasic Personality Inventory (MMPI), and Strong Vocational Interest Blank (SVIB). Two hypothetical personality dimensions were proposed to account for the fourfold typology generated from the item analysis: origence and intellectence. After studying other empirical findings, a fourfold personality typology was proposed: (1) high origence, low intellectence; (2) high origence, high intellectence; (3) low origence, low intellectence; and (4) low origence, high intellectence. The typology follows the order

of the psychometric arrangement adopted in the initial analysis, but with the structured/unstructured dimension along the vertical axis and concrete/abstract along the horizontal axis.

Duration: 1968-completed.

Cooperating group(s): The Governor's School of North Carolina; Institute for Research in Social Science, Chapel Hill.

Publications: Welsh, G. S. *Creativity and intelligence: A personality approach.* Chapel Hill, North Carolina: Institute for Research in Social Science, 1975.

Emotionally Disturbed and Mentally Ill

35-JA-1 A MINIMAL CLINICAL DATA SYSTEM FOR CHILD PSYCHIATRY

Investigator(s): M. G. Magnussen, Ph.D., Chief Psychologist; J. Homann, M.D., M.P.H., Clinical Director; Peter B. Henderson, M.D., Associate Director; Barbara Snyderman, Ph.D., Staff Psychologist; and Zaven Khachaturian, Ph.D., Research Psychologist, Pittsburgh Child Guidance Center, 201 DeSoto Street, Pittsburgh, Pennsylvania 15213.

Purpose: To develop a clinical data collection system to select appropriate treatment modalities for children and families.

Subjects: Children, ages 2 to 17, and their families.

Methods: The literature was reviewed on clinical decision making and the purposes of diagnosis. The minimal amount of clinical data that is necessary and sufficient to decide on the appropriate treatment modality was identified. The rules clinicians use to make decisions about treatment selection were specified. Parent, family, community resource, and child guidance center variables related to the need for treatment and the selection of treatment were made explicit. An item was included in the system only if it directly related to treatment selection. The reliability and validity of all system items were statistically determined.

Findings: A clinical decision making model was developed consisting of four components: (1) dispositional options (the modes of treatment available); (2) construct variables that differentiate among these options, (3) theoretical assumptions underlying construct variables, and (4) diagnostic items directly qualifying construct variables.

Duration: January 1969-July 1975.

Publications: Results are available from the investigators.

35-JB-1 ADULT PERCEPTIONS AND CHILD BEHAVIOR DYSFUNCTIONS

Investigator(s): Gary E. Stollak, Ph.D., Associate Professor; and Lawrence A. Messe, Ph.D., Associate Professor, Department of Psychology, Michigan State University, 104 Olds Hall, East Lansing, Michigan 48824.

Purpose: To explore the effects of person perception variables on adult-child caregiving behavior and child reactions; and to explore the implications of the results of this research on understanding the development of child behavior dysfunctions.

Subjects: Study I: 90 college undergraduates and parents of 24 boys and 24 girls, ages 8 to 10, who responded to an advertisement to participate in research for pay. Study II: 45 parents of children, ages 8 to 10, who have been referred for psychotherapy to the Psychological Clinic of Michigan State University; and 45 parents of normal children, ages 8 to 10, matched to the clinic group on (1) age and sex of referred child; (2) family socioeconomic status; and (3) number, age, and sex of siblings of referred child.

Methods: The basic hypotheses of the research suggest (1) that a negative perceptual bias will lead to selective attention and punishment of a child's negative and undesirable behaviors, and the child's positive, prosocial behaviors will tend to be ignored; and (2) that a positive perceptual bias will lead to selective attention and rewarding of a child's positive prosocial behaviors, and the child's negative and undesirable behaviors will tend to be ignored. This project consists of two studies: Study I focuses on establishing a link between adult perception, adult values and attitudes, and adult and child behavior. Study II focuses on establishing a link between parental perceptual bias and child psychopathology. A set of standard perceptual stimulus situations (SPS) was developed to differentiate positive, negative, and balanced behavior perceivers (on the basis of Partyka's research with the Child Behavior Checklist). For this purpose, two 20-minute videotapes were produced of the interaction between an adult therapist and a child in a playroom setting. Study I: Positive, negative, and balanced behavior perceivers were selected from an initial sample of 300 male and 300 female undergraduates who viewed the SPS film. The selected subjects will spend one unstructured hour in the playroom with a child, and then will be interviewed by the experimenter following a schedule developed by Baumrind. The interviewer will also complete Baumrind's Parent Interview Scale on 56 dimensions of behavior that reflect (1) control, (2) maturity demands, (3) communication, and (4) nurturance. Two trained coders will score the videotaped interaction according to two coding systems covering a total of 50 adult and child behaviors. The data obtained in the adult-child interaction sessions will be analyzed through multivariate analyses of variance. Each analysis has the following dimensions: 2 (sex) X 6 (order in which child interacted with adults having the three different perceptual styles) X 3 (perceptual style of adult, a repeated measure within a child). Four separate multivariate analyses will be performed on adult and child behaviors as scored by the two coding systems. Study II: As in the first study, parents' perceptual style scores will be determined using the SPS videotape. Parents will also be interviewed; will complete questionnaires on their attitudes, values and opinions; and they will interact for 1 hour in the playroom with their child. Subjects' perceptual style scores will be subjected to a 2 (family type: clinic or control) X 2 (sex of referred child) X 2 (sex of parent) mixed model analysis of variance, probably with a least squares solution to the problem of unequal cell frequencies because, typically, more boys than girls are referred to the clinic. Product-moment correlation coefficients will be used to examine possible relationships between perceptual style scores, questionnaire responses, interview responses, one parent's behavior in playroom, other parent's behavior, and child's behavior. If the expected relationships are obtained, the investigators plan to conduct (1) a longitudinal study to determine the causal direction of the relationship between perceptual bias in parents and children's psychological functioning, and (2) another study to identify high risk parents.

Duration: September 1974-August 1976.

Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: (1) Saxe, R. and Stollak, G. E. Curiosity and the parent-child relationship. *Child Development*, 1971, 42, 373-384. (2) A paper presented at the 1971 meeting of the Midwestern Psychological Association: Stollak, G. E.; Liberman, M.; and Denner, B. Assessment of family play interaction. (3) Stollak, G. E. Undergraduates and children: An integrated graduate-undergraduate program in the assessment, treatment, and prevention of child psychopathology. *Professional Psychology* (in press).

35-JB-2 DELINEATION OF GENERAL COGNITIVE, MEMORY, AND VISUAL-MOTOR DEVELOPMENT WITH NORMAL AND PATHOLOGICAL INDIVIDUALS

Investigator(s): Gerald Fuller, Ph.D., Director; Douglas Friedrich, Ph.D., Research Director; Howard Graham, M.A., Research Associate; and Marjorie Berlinghof, M.A., Research Associate, Psychology Center, Central Michigan University, Mount Pleasant, Michigan 48859.

Purpose: To assess the usefulness of the general idea of delineating multiple consequents and/or determinants of development in making positive interventions with pathological children, adolescents, and adults.

Subjects: 560 male and female children, adolescents, and adults, including normals, neurotics, and schizophrenics.

Methods: The following 4 x 2 x 3 x 3 x 2 x 2 multivariate design was employed: 4 (age) x 2 (sex) x 3 (pathology) x 3 (length of institutionalization) x 2 (auditory presentation rate) x 2 (auditory word association value). Length of institutionalization was classified as either outpatient, 3 months to 1 year, or 3 to 6 years. Pathology referred to either normal, neurotic, or schizophrenic. Dependent conditions were general cognitive, visual memory, auditory memory, and visual-motor abilities, measured by the Wechsler Intelligence Scale for Children, Wechsler Adult Intelligence Scale; monaural, dichotic listening exercises; Revised Visual Retention Test, and Minnesota Percepto-Diagnostic Test.

Findings: Initial multivariate analyses indicate differential ability patterns within developmental and comparative groups.

Duration: September 1974-August 1975.

Cooperating group(s): Traverse City State Hospital; Clinton Valley Center (Pontiac); Saginaw Community Hospital (Psychiatric Unit); Central Michigan University Research and Creative Endeavors Committee.

Publications: An initial summary of the project, "Developmental-comparative analyses of cognitive patterns," is available from the investigators.

35-JC-1 AN INVESTIGATION OF HYPERACTIVITY AND PRESCHOOL EXPERIENCE

Investigator(s): Eric R. Wright, MASc., Psychologist, Midwestern Regional Center, Palmerston, Ontario NOG 2PO, Canada.

Purpose: To assess differences between hyperactive and nonhyperactive preschool children related to peer interaction and teacher attention; and to determine if peer interaction and teacher attention variables change throughout a period of preschool attendance.

Subjects: 20 hyperactive and nonhyperactive preschool children: 8 boys and 12 girls, ages 3 to 5.

Methods: The investigator utilized a between-groups repeated measures design. Data collection involved systematic observation, teacher ratings, and sociometric testing. Analysis of variance and trend, t-test, and correlational analyses were used.

Findings: Initially hyperactives exhibited less peer interaction and received more teacher attention than later. After 12 weeks of preschool, hyperactives demanded less teacher attention.

Duration: January 1974-completed.

Cooperating group(s): Hespeler Preschool Education Centre, Hespeler-Cambridge, Ontario, Canada.

Publications: Copies of the study are available from the investigator.

35-JC-2 REINFORCEMENT SPILLOVER EFFECTS ON THE SOCIAL AND ACADEMIC BEHAVIOR OF BEHAVIORALLY HANDICAPPED PRESCHOOL CHILDREN

Investigator(s): Phillip S. Strain, Ph.D., Assistant Professor, School of Education, American University, Washington, D. C. 20016.
Purpose: To determine which parameters of reinforcement contingencies and which nontarget child behaviors contribute to a *spillover* effect in applied settings.
Subjects: Four behaviorally handicapped preschool boys, ages 36 to 50 months. Subjects displayed a variety of behavioral deficits including delayed speech, frequent tantrums, avoidance of peers and adults, and opposition to social requests.
Methods: The direct and spillover effects of reinforcement on social and academic behaviors were evaluated following a combination of a reversal (ABAB) and multiple baseline design. Social and academic behaviors were evaluated by independent observers upon whom reliability was assessed for each experimental period. Reinforcement consisted of the delivery of social praise for appropriate social and academic behaviors.
Findings: The intensity of the reinforcement spillover effect appears to be controlled, in part, by (1) the presence of a well-developed imitative repertoire among nontarget children, and (2) nontarget subjects' prior reinforcement history.
Duration: January 1975-August 1975.

35-JE-1 STUDIES OF EARLY INFANTILE AUTISM AND CONTROLS

Investigator(s): Harold E. Himwich, M.D., Research Director; and N. Narasimhachari, Ph.D., Administrative Research Scientist, Thudichum Psychiatric Research Laboratory, Galesburg State Research Hospital, Galesburg, Illinois 61401.
Purpose: To compare the urinary constituents of children diagnosed for early infantile autism and of normal controls; and to obtain information on whether early infantile autism is a manifestation of schizophrenia appearing in the earliest years of life.
Subjects: Eight boys and two girls, ages 9 to 18, diagnosed for early infantile autism; and 10 normal control children matched for age, sex, height, and weight.
Methods: All subjects were placed in a hospital ward where each received a rigorous diet calculated according to age, height, and weight. Urine was collected every 24 hours for 14 days and analyzed for dimethylated tryptamines. Positive identification of metabolites was accomplished by gas chromatography-mass spectrometry. Serum samples were checked for indolethylamine N-methyltransferase activity. A consulting psychiatrist followed the clinical courses of the subjects.
Duration: April 1974-April 1975.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-JE-2 LEARNING STUDIES IN AUTISM

Investigator(s): B. J. Freeman, Ph.D., Assistant Professor, School of Medicine, University of California at Los Angeles, Los Angeles, California 90024.
Purpose: To analyze autistic children's learning processes.
Subjects: Six children, ages 2 1/2 to 6, identified as autistic and having a syndrome of perceptual inconsistency.

Methods: An operant lever press experiment was used. Autistics' ease in learning one and two stimuli were compared.
Findings: Autistic children learn one stimulus faster than two stimuli.
Duration: June 1974-June 1976.
Cooperating group(s): Division of Research, Maternal and Child Health Service, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-JE-3 THE VPAE: A BEHAVIORAL RATING SCALE FOR MEASURING THE PROGRESS OF SEVERELY MALADAPTIVE (PSYCHOTIC AND AUTISTIC) CHILDREN

Investigator(s): Robert Hughes, Ph.D., Director; and Darlene Streedbeck, B.A., Program Coordinator, Children's Unit, Problems-in-Living Center, 2000 South Summit Avenue, Sioux Falls, South Dakota 57105.
Purpose: To develop an objective, behaviorally based rating scale to evaluate the progress of severely maladaptive children in verbal behavior, peer interaction, adult interaction, and emotional behavior--areas of frequent deficiency, not adequately or easily measured by other scales or observational techniques; and to provide a model for developing scales for other behaviors of similar importance and for a wider age range.
Subjects: The population of the residential Children's Unit program plus children in the associated nonresidential special education school program. Over several months, the sample will constitute 15 to 20 children, ages 3 to 9. Residential children are generally deficient in self-help, and social and speech skills. Nonresidential children usually are management problems and in need of remedial academic work.
Methods: The research doesn't follow traditional research design because of the innovative nature of presenting a scale to be used with a specific population. The 5-point scale of salient dimensions in each of the four behavioral categories is being submitted to the technique of optimal scaling in order to derive an interval scale. Correlations will be done with the Vineland Social Maturity Scale, staff rankings of the children by behavioral category, and related observational recordings. Hopefully, the scale can be made available to similar programs to facilitate the development of norms.
Findings: Preliminary correlations with the measures are encouraging. Reliability measures also appear to be within acceptable ranges. The scale promises to be an asset to professionals working with similar populations, since the investigator suggests that existing scales are inadequate, inappropriate, or too subjective to be of use for young, severely maladaptive children.
Duration: January 1975-December 1975.
Publications: Presented as a poster session at the 9th Annual Meeting of the AABT, San Francisco, California, December 1975.

35-JF-1 CLOSENESS PATTERNS IN THE FAMILIES OF YOUNG SCHIZOPHRENICS

Investigator(s): Carol F. Hoover, D.S.W., Social Worker; and Yolande Davenport, M.S.W., Social Worker, Laboratory of Clinical Science, Division of Clinical and Behavioral Research, National Institute of Mental Health, Building 10, Room 3N-250, 9000 Rockville Pike, Bethesda, Maryland 20014.

Purpose: To study the pattern of family closeness preferences reported by children in families with schizophrenic, neurotic, or normal adolescents.
Subjects: 68 parents, 67 boys, and 60 girls. Mean age of 82 interviewed offspring: schizophrenic (S), 18.06; neurotic (N), 16.07; normal (C), 16.88.
Methods: The subjects were interviewed. Percentages of child closeness preferences to mother, father, sibling, or nobody were analyzed in comparing diagnostic groups. Index patients were compared to next-of-age sibling.
Findings: The neurotic family emerged as one in which intensities, splits, or coalitions affected a number of children in a somewhat similar pattern, while the schizophrenic family was characterized by differences in the closeness pattern of the schizophrenic compared to his siblings.
Duration: 1963-1975.
Cooperating group(s): The Family Rorschach Study; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Results of the study are available from Dr. Hoover.

35-JG-1 CONFLICT BETWEEN THE PARENTS OF SCHIZOPHRENICS

Investigator(s): Carol F. Hoover, D.S.W., Social Worker, Laboratory of Clinical Science, Division of Clinical and Behavioral Research, National Institute of Mental Health, Building 10, Room 3N-250, 9000 Rockville Pike, Bethesda, Maryland 20014.
Purpose: To compare marital conflict levels and styles of coping with anger reported by the parents of schizophrenic, maladjusted, and community young people.
Subjects: Experimental group: 154 parents (77 couples) who have at least two children, ages 13 to 27: 22 couples had a schizophrenic son or daughter (S group), and 25 couples had a maladjusted nonpsychotic child (M group). Seventeen couples were later tested. Control group: 30 couples from the community (C group) located through city directories from the same or adjacent blocks where parents of the initial schizophrenic patients lived. C group parents are considered representatives of the communities from which they were drawn, rather than selectively normal.
Methods: Diagnoses of schizophrenic and maladjusted offspring were made by professional treatment-research staff of four hospital wards and a mental health clinic. During the study, schizophrenic and maladjusted young persons were undergoing psychiatric treatment. A 70-item card sort, the Conflict in Marriage Scale (CIMS), was administered to each couple. The CIMS includes three agree-disagree items which consist of statements about the child by name, as well as 67 other dichotomous items related to anger or conflict between the parents. A *conflict ratio* is calculated for each subject. The numerator of this ratio consists of item responses indicating anger and conflict enjoyment, while the denominator represents coping mechanisms which might be expected to reduce verbally expressed dissension. Ratios are determined for each parent, and the pair's individual ratios are added together to obtain the *couple conflict ratio.*
Findings: Both S and M pairs showed conflict levels (i.e., couple conflict ratios) significantly higher than C partners. M children were involved in the most parental conflict. The schizophrenic patient was included in significantly more conflict than his/her sibling closest in age, but S group parents reported slightly less conflict involving their nonschizophrenic offspring than did C families. S group mothers reported considerable support from their daughters but little from schizophrenic sons. Weighted responses to 67 test items enabled highly accurate predictions of the diagnostic group to which each

parent belonged (S, M, or C), provided sex was known in advance (discriminant function analysis). No overall differences in marital dominance between the three groups were found, but responses to some items indicated that S wives felt themselves habitual losers, while S husbands did not experience themselves as victors in domestic combat.
Duration: 1971-1977.
Publications: Hoover, C. F. Conflict between the parents of schizophrenics. Studies in Social Work No. 92. Doctoral dissertation, The Catholic University of America, Washington, D. C., 1973.

35-JI-1 EVALUATION OF A COMPREHENSIVE PROGRAM FOR ADOLESCENTS

Investigator(s): Ronald S. Pryer, Ph.D., Chief Psychologist, Central Louisiana State Hospital, P. O. Box 31, Pineville, Louisiana 71360.
Purpose: To evaluate optimum treatment for emotionally disturbed adolescents through a comprehensive 5-day-a-week residential program allowing continued and frequent contact with family and peers.
Subjects: 175 boys and girls, ages 12 to 18, who are experiencing severe adjustment problems and are judged not effectively treatable in the community.
Methods: Approximately 25 percent of the subjects will comprise a control group. Control subjects will receive the standard treatment at other inpatient or outpatient treatment facilities. Evaluation will focus on patient and therapist variables, process measures of individual program elements, and comprehensive pre- and posttreatment measures with psychometric, behavioral, social, vocational, legal, and educational criteria. Pre- and posttreatment measures were Wechsler Intelligence Scale for Children, Wide Range Achievement Test, Sixteen Personality Factors Questionnaire or the High School Personality Questionnaire, and objective data regarding educational, vocational, legal, and social adjustment. Parents and siblings are also tested with personality, self- and other-perception measures, and various adjustment indices. Multivariate analysis of variance will be employed to test outcome differences between the treatment and control groups.
Duration: September 1972-August 1976.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Annual and final reports are given to the National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-JI-2 ADOPTED VS NONADOPTED ADOLESCENTS IN RESIDENTIAL TREATMENT

Investigator(s): I. Louis Young, Ph.D., Chief Psychologist; A. Teheri, M.D., Staff Psychiatrist; and M. Harriman, B.S., Mental Health Worker Supervisor, Taylor Manor Hospital, Ellicott City, Maryland 21043.
Purpose: To determine if there are differences in clinical symptomatology and the severity of illness in adopted as compared to nonadopted adolescents in inpatient treatment.
Subjects: 92 inpatients (58 boys, 34 girls), ages 13 to 17, half adopted and half not adopted, diagnosed as psychotic, neurotic, and having character disorders.

Methods: At each admission a problem checklist was completed by the parents and a psychiatric diagnosis was made. Patient's progress was rated from admission to discharge. Other data collected included length of hospitalization, social history ratings related to school, age of adoption, and age of onset and duration of problem. Nonadopted patients served as the control group.
Findings: Preliminary analysis indicates that out of 139 consecutive admissions, 33 percent were adopted.
Duration: April 1975-July 1975.
Publications: A paper presented at the Annual Meeting of the American Association of Psychiatric Social Workers for Children, New Orleans, Louisiana, November 1975: Young, I. L.; Teheri, A.; and Harriman, M. Adopted vs. nonadopted adolescents in residential psychiatric treatment.

Juvenile Delinquency

36-KC-1 YOUTH GANG VIOLENCE

Investigator(s): Walter B. Miller, Ph.D., Director, National Youth Gang Survey, Center for Criminal Justice, Harvard University Law School, Cambridge, Massachusetts 02138.
Purpose: To examine the hypothesis that a new wave of juvenile gang violence is affecting major U. S. cities; to examine patterns of gang behavior in light of theoretical approaches relevant to the emergence and dynamics of juvenile street gangs; and to collect descriptive information on (1) the number of gangs, their sizes, and their characteristics in the nation's largest cities; (2) the character and frequency of their violent and/or criminal activities; (3) their relation with one another and with adult groups; and (4) the measures currently being taken by law enforcement, social service, and other agencies to cope with gangs and gang violence.
Methods: Site visits were conducted to the nation's five largest cities in which gangs are known to present serious problems and to seven other cities where gang problems are possible or likely. Visits centered on interviews with local police, social service workers, and others familiar with the problem. Media reports were reviewed prior to the site visits. The basic analytic principle underlying data gathering procedures is the comparative method; i.e., gathering both qualitative and quantitative data bearing on the same informational categories for a number of different locales in order to determine general parameters and the range of variability with respect to the informational categories.
Duration: September 1974-August 1975.
Cooperating group(s): National Institute of Law Enforcement and Criminal Justice, Law Enforcement Assistance Administration, U. S. Department of Justice.

38-KK-1 THROUGH THE LOOKING GLASS: REFLECTIONS ON RUNAWAY YOUTH

Investigator(s): William J. Reid, Ph.D., Professor; and Anne E. Fortune, A.B., Graduate Student, School of Social Service Administration, University of Chicago, 969 East 60th Street, Chicago, Illinois 60637.

Purpose: To describe services provided for runaway center clients and their impact on delinquency prevention; to obtain clients' evaluations of the services of a runaway center; and to study the causes and consequences of runaway behavior.

Subjects: 84 boys and 138 girls, ages 9 to 22, who applied for service at a Chicago runaway center, 134 of whom were runaways at the time of initial contact (i.e., were under 18 and had left home without parental permission with the intention of running away); parents of 31 runaways; 50 volunteer paraprofessionals; and 8 paid professional staff members of the runaway agency.

Methods: All clients who applied in person to the agency during specified time periods in 1972 and 1973 were included in the sample. Immediately after the initial interview with each client, counselors completed a multiple choice and open-ended questionnaire about the client and about their own and other counselors' interventions. The counselors also completed a second questionnaire 6 weeks later. Two to 4 months after initial agency contact, 148 of the adolescents and 31 of their parents were located and interviewed about their problems in a semistructured interview, their impressions and evaluation of the agency's services, and their circumstances since agency contact. Analysis of client data emphasized comparisons of counselor, adolescent, and parent perceptions of problems, and comparisons of runaway and nonrunaway problems. Because agency staff consists primarily of volunteer paraprofessionals, counselor interventions and diagnoses were analyzed by counselor experience, and a written questionnaire about background and counseling attitudes was administered to agency staff. A sample of 29 taperecorded counseling sessions was analyzed by experienced independent judges.

Findings: At the time of the follow-up, 75 percent of the adolescent clients were located at home. Most of these clients had not run away since agency contact, and most reported improvement in both family and other problems. Eighty-four percent of the adolescents reported that agency contact had helped them. Although parents and children as groups reported the same patterns of problems and conflicts, there was almost no agreement between individual parent-child pairs. Runaways reported significantly more severe conflict with their fathers, more conflict with parents about responsibilities within the family, and less conflict with siblings than nonrunaway adolescents, although in both groups home conflict was a dominant factor. Nonrunaways were comparably involved, or significantly more involved, in factors often associated with running away, such as drug abuse, delinquent activity, or abnormal peer influence.

Duration: January 1972-completed.

Cooperating group(s): Looking Glass (counseling center for runaways); Travelers Aid Society of Metropolitan Chicago; Illinois Law Enforcement Commission.

Publications: Two reports are available from the investigators: (1) Fortune, A. E. and Reid, W. J. Through the looking glass: Reflections on runaway youth, 1973. (2) Fortune, A. E. and Reid, W. J. Images in the looking glass: A study of a counseling center for runaways, 1972.

35-KK-2 PROFILES AND PERSPECTIVES ON RUNAWAY YOUTH

Investigator(s): Peter C. Kratcoski, Ph.D., Associate Professor, Department of Sociology, Kent State University, Kent, Ohio 44242.
Purpose: To identify the characteristics and behavior patterns of runaways and the modes of treatment by agencies involved with runaways.
Subjects: 1,000 boys and girls, ages 12 to 18, with different racial and ethnic backgrounds, who responded to a questionnaire distributed randomly in four high school systems; a juvenile court center detention home; two centers for runaways; and an institution for juveniles. School system respondents comprise a control group, since a majority of these respondents had never run away from home.
Methods: A questionnaire, comprised of several sections, was distributed to youths in various settings. Data were collected on the respondent's demographic characteristics, self-image, relationship with family, school adjustment and progress, peer group relationships, and runaway experiences. The runaway experiences portion of the questionnaire contained items on the number of runaway experiences, reasons for running away, length of run, where the youth stayed and why he came back. Interviews were conducted with and questionnaires were given to administrators of runaway centers.
Duration: November 1974-June 1975.

35-KK-3 VOLUNTEER PROGRAMS IN PREVENTION AND DIVERSION OF JUVENILE DELINQUENCY

Investigator(s): Timothy F. Fautsko, M.H.S., Director of Training; and Ivan H. Scheier, Ph.D., Director, National Information Center on Volunteerism, P. O. Box 4179, 1221 University Avenue, Boulder, Colorado 80302.
Purpose: To identify volunteer programs involved in prevention of juvenile delinquency or diversion of children from the criminal justice system in order to facilitate the coordination of existing youth serving agencies in the United States.
Methods: A directory of volunteer programs was developed that describes programs and their use of volunteers. For this purpose, "volunteer" was defined as "any person or group of persons who offer their services without pay or profit, although reimbursement of work-related expenses is permissible." The project focused on programs for prevention *from* (as opposed to *within*) the criminal justice system, defined as either: (1) the prevention of any future formal or informal contact with the criminal justice system in cases in which this is likely unless more positive action is taken, or (2) the prevention of fuller adjudicatory process in the future when actual informal contact with the criminal justice system has already occurred. A sample of potential volunteer programs with some representation of geographical, conceptual, community size, and program variety variables was developed by (1) scanning National Information Center on Volunteerism national and state files on over 2,000 volunteer programs; (2) searching reference works (e.g., Central Resource Summaries of Pre-Official Court Delinquency Prevention Programs; Annual Report of Federal Activities in Juvenile Delinquency, Youth Development, and Related Fields); (3) following leads on programs during site consultations; and (4) sending a letter of inquiry to 100 statewide coordinators of volunteers, administrators in the criminal justice field, and other knowledgeable persons. All 293 programs generated received a packet requesting project demographic data as well as information about their program related to (1) geographical area served, (2) purposes, (3) mode of organization, (4) program status, (5) funding patterns, (6) type of clients, (7)

type and number of volunteers, (8) general description, (9) evaluation, (10) transposability of program, and (11) further reading materials available. Of 293 programs, 101 responded (34 percent). Eighty-eight of the responses were usable, and abstracts were prepared for 33 of these programs. The abstracts, a directory of all 88 programs, and analysis of current trends and recommendations for the future, a list of resource organizations, and an annotated bibliography are included in the directory.
Findings: An updated directory has been compiled.
Duration: 1972-1975.
Cooperating group(s): Youth Development and Delinquency Prevention Administration, Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare.
Publications: Fautsko, T. F. and Scheier, I. H. *Volunteer programs in prevention and diversion,* 1973. U. S. Department of Health, Education, and Welfare, SRS Publication No. 73-26031. An updated version by the National Information Center on Volunteerism is now available.

35-KK-4 POLICE DIVERSION OF JUVENILE OFFENDERS

Investigator(s): Malcolm W. Klein, Ph.D., Senior Research Associate, Social Science Research Institute, University of Southern California, Los Angeles, California 90007.
Purpose: To understand, evaluate, and test propositions and programs dealing with juvenile diversion and labeling.
Subjects: Approximately 600 male and female juvenile offenders, ages up to 18, who have been arrested by the police.
Methods: During three projects various procedures were used: observation, interviews, questionnaires, experimental design with random assignment of subjects to various conditions, and official records.
Duration: Summer 1974-December 1976.
Cooperating group(s): Over 30 police departments; National Institute of Mental Health, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

Corrections

35-KP-? JUVENILE COURTS: DIRECT PROBATION SUBSIDY PROGRAM

Investigator(s): Gary D. Cope, Systems Analyst; and Richard A. Benz, Program Technician, Office of Data Processing, Ohio Youth Commission, 2234 South Hamilton Road, Columbus, Ohio 43227.
Purpose: To test the impact of a direct probation subsidy program on juvenile courts in five pilot counties.

Subjects: 3,831 youths placed on probation or committed to juvenile correctional institutions in 1973-1974.

Methods: The Direct Probation Subsidy Program provides that each participating juvenile court be subsidized $4,000 per youth for reducing commitments to state correctional institutions below a specified baseline. To qualify for such subsidy, the county must file letters of intent (monies are tied to expected reductions) along with a plan for enriching probation services. This plan must include a *special services* caseload that serves as an alternative to commitment. Continuation of funds for participating counties are tied to commitment reductions. Evaluation of the program employed a four-group nonexperimental research design. Group I (N = 2,605) consisted of all youths placed on probation in the five counties studied who were *not* placed in a special services unit. Group II (N = 258) consisted of all youths placed in such units. Group III (N = 481) consisted of all youths permanently committed to Ohio Youth Commission (OYC) from the five subsidy counties in calendar year 1973, and Group IV (N = 487) consisted of all youths permanently committed from the subsidy counties in calendar year 1974. These four groups were examined and compared on demographic and offense history information. In addition, commitment rates from calendar year 1967 through calendar year 1974 were evaluated for each county and compared with statewide commitment trends.

Findings: Taken as a whole, subsidized counties showed a 1 percent increase in permanent commitments from 1973 to 1974. This compared with a 25 percent increase across the state of Ohio. Three of the five subsidized counties reduced their commitments by 29, 25 and 21 percent, respectively. The remaining two counties showed increases of 14 and 69 percent. The type of youth placed in special supervision groups tended to vary from county to county. The diversion effect of the subsidy program was most pronounced when the type of youth placed in special services corresponded closely with a subtype of the 1973 commitments. This did not hold true if youths in special services were very serious repeat offenders. This would suggest that the subsidy program might maximize its diversion value if special services units were oriented toward a specialized group of probationers with a high commitment potential.

Duration: January 1974-December 1974.

Cooperating group(s): Law Enforcement Assistance Administration, U. S. Department of Justice; Administration of Justice Division, Ohio Department of Economic and Community Development; Court of Common Pleas; Clark County Ohio; Family Court of Lucas County Ohio; Juvenile and Domestic Relations Court of Montgomery County Ohio; Juvenile Court of Muskingum County Ohio; Juvenile Court of Summit County Ohio.

35-KR-1 THE IOWA DIFFERENTIAL CLASSIFICATION AND TREATMENT PROJECT

Investigator(s): Howard E. Tupker, M.A., Chief Psychologist, Iowa Training School for Boys, Eldora, Iowa 50627.

Purpose: To test a differential diagnosis and treatment system with institutionalized delinquents and evaluate its effectiveness as a treatment approach, compared to a traditional approach in the rehabilitation of institutionalized delinquent youths; and to explore the usefulness, feasibility, and probable value of adopting a differential classification system on a full scale at the institution.

Subjects: 272 institutionalized (court-committed) delinquent males, ages 12 to 18, including 228 whites (83.8 percent), 35 blacks (12.9 percent) and 9 persons from other groups (3.3 percent). Subjects' mean Wechsler Full Scale IQ was 96.16 and average number years of education completed was 8.45.

Methods: Three homogeneous cottages were utilized for the experimental group, each cottage containing a single homogeneous group insofar as behavioral classification was concerned. Three heterogeneous (control) cottages were operated. Subjects were diagnosed and classified according to a modified Quay system. This study focuses on the inadequate-immature, the unsocialized-aggressive, and the socialized-subcultural classifications. Treatment programs appropriate for the special needs of individuals in the three behavior categories were established in each experimental cottage. Comparisons of the differential approach experimental programs and the traditional treatment control programs were made, utilizing multiple outcome criteria. Outcome criteria included questionnaire responses, indices of actual behavior, and pretest-posttest changes reflected by personality inventories. For the latter, 30 scales from the California Psychological Inventory and the Jesness Inventory were used.

Findings: A more positive outcome for the experimental groups than the control groups was indicated on the personality measures. The most clear-cut differences occurred between the two socialized-subcultural groups. Differences included significant positive personality scale changes suggesting improved socialization, social conformity, optimism, interest in academic activities, and reduced alienation in the experimental group. Differences were least notable between the two inadequate-immature groups. Personality scale changes common to all groups were found. Outcome measures other than personality scales generally showed no significant differences.

Duration: January 1973-completed.

Cooperating group(s): Iowa Crime Commission.

Publications: Tupker, H. E. and Pointer, J. C. *The Iowa Differential Classification and Treatment Project.* Eldora, Iowa: Iowa Training School for Boys, March 1975.

35-KR-2 ARREST AND REINSTITUTIONALIZATION AFTER RELEASE FROM STATE SCHOOLS AND OTHER FACILITIES OF THE NEW YORK STATE DIVISION FOR YOUTH

Investigator(s): Irwin J. Goldman, Ph.D., Associate Research Analyst, Research, Program Evaluation, and Planning, New York State Division for Youth, 2 World Trade Center, 23rd floor, New York, New York 10047.

Purpose: To assess the adequacy of New York State Division for Youth training schools, centers, and other residential treatment programs with respect to the prevention of postrelease arrest and reinstitutionalization.

Subjects: (1) 843 youths, over age 15, who were released from New York State schools and centers January 1, 1971 through June 30, 1971 and who did not return; (2) 340 youths selected systematically from the population of all youths released from July 1, 1971 through March 31, 1973 from other facilities of the New York State Division for Youth; and (3) 318 youths selected randomly from the population of all youths released from state schools and centers from July 1, 1971 through March 31, 1975.

Methods: Records of arrest and institutionalization were obtained from the New York State Division of Criminal Justice Services, Division for Youth aftercare staff, and Division for Youth central records. Statistics were examined related to postrelease juvenile arrest, adult arrest, return to state school, commitment to local and state correctional facilities, commitment to narcotic rehabilitation facilities, and related outcomes. Social background characteristics were considered as predictive outcome variables.

Duration: March 1973-completed.

Cooperating group(s): New York State Division of Criminal Justice Services.

Publications: Goldman, I. J. *Arrest and reinstitutionalization after release from state schools and other facilities of the New York State Division for Youth: Three studies of youths released January 1971 through March 1973.* New York: New York State Division for Youth, 1974.

THE CHILD IN THE FAMILY

Family Relations

35-LA-1 FOLLOW-UP OF GROUP THERAPY: INFLUENCE OF GROUP THERAPY EXPERIENCE ON SUBJECTS AND THEIR CHILDREN

Investigator(s): Donald A. Shaskan, M.D., Chief, Mental Health Clinic, Veterans Administration, 1515 Clay Street, Oakland, California 94612; William L. Moran, M.S.W.; and Olive Moran, B.A., 134 El Cerrito Avenue, Piedmont, California 94611.
Purpose: To study the influence of a group therapy experience, which occurred 30 years ago, on subjects and their children.
Subjects: 25 men and women patients who participated in 1945 in spontaneous group psychotherapy (i.e., a voluntary gathering of friends who sought professional leadership on their own outside the customary referral channels); and their children, eight of whom were under age 20 in 1945. Approximately eight subjects (or one-third of the sample who withdrew from the group after attending one to four sessions) comprise the control group.
Methods: A questionnaire is being forwarded to all participants, including four therapists. The questionnaire consists of items on marriage, divorce, number of children, improvement or lack of improvement, professional and personal effectiveness, effectiveness in the parental role, and sections on children and therapists. Data will be coded for correlation and regression, as well as compared to previous follow-up data published in 1954.
Findings: Subjects questioned about their willingness to participate in the study have responded positively.
Duration: April 1973-April 1976.
Publications: Berne, E. The natural history of a spontaneous group. *International Journal of Group Psychotherapy*, 1954, 4, 74-85.

35-LA-2 CONSISTENCY AND ANTECEDENTS OF INFANT ATTACHMENT DURING THE FIRST YEAR

Investigator(s): Robert P. Klein, Ph.D., Research Psychologist; and Leon J. Yarrow, Ph.D., Research Psychologist, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development, Social and Behavioral Sciences Branch, Auburn Building, Room 220, Bethesda, Maryland 20014.
Purpose: To compare data obtained from observations in the home with data from observations of structured situations in the laboratory, and with data from an interview with the mother, in order to clarify the conceptual issue of what are the most appropriate behavioral measures of attachment; and to examine the antecedents of the distinctive tie between mother and infant.

Subjects: 40 mothers and their 12-month-old infants: 20 boys and 20 girls, half first-born and half later born.
Methods: Two home observations were completed of selected mother and infant behaviors in a number of critical situations comparable to measures used in laboratory studies of attachment. A laboratory session was conducted that included (1) approach by stranger and mother, (2) interview of mother, (3) observation of infant in free play, and (4) separation from mother. About half the sample was observed at 6 months.
Findings: The infants exhibited clear differential behavior to mother versus the stranger, as well as considerable positive behavior toward the stranger and some distress toward the mother.
Duration: March 1973-March 1976.

35-LA-3 PERCEPTUAL RESPONSES TO INFANT CRYING: IDENTIFICATION OF CRY TYPES

Investigator(s): Harry Hollien, Ph.D., Director, Communication Sciences Laboratory, ASB-50, University of Florida, Gainesville, Florida 32601; E. Muller, Department of Speech, 107 Parrington Hall, University of Washington, Seattle, Washington 98100; and T. Murray, Veterans Administration Hospital, 3350 La Jolla Village Drive, San Diego, California 92161.
Purpose: To assess by highly structured and controlled procedures the ability of mothers to perceptually identify and differentiate infant cries; and to investigate the possibility that the accuracy of mothers' judgments relates to whether the mother is judging cries produced by her own infant or by an unfamiliar infant.
Subjects: Four boy and four girl healthy infants, ages 3 to 5 months.
Methods: Samples of the crying of each of the infants were obtained within a 3-day period by administering three types of stimuli: pain, auditory, and hunger stimulation. In order to avoid extraneous stimulation, the subjects wore clean diapers and were seated in a comfortable infant reclining seat. If the child appeared discontented, (s)he was rescheduled. For pain stimulation, crying was elicited by snapping an elastic band against the sole of the infant's left foot. Two large wooden blocks were slammed together making a loud clap for the auditory or startle stimulation. The third type of stimulation involved allowing the mother to feed the infant at home at its normal feeding time and halting the feeding after several seconds. All the cries were tape recorded at a constant level throughout the procedure, and each cry was recorded for approximately 90 seconds from the time of stimulus application. An experimental tape of 96 randomized cry samples was produced containing six samples for each infant; i.e., first and third 15-second segments of cries evoked by pain, hunger, and startle stimuli. Two groups, mothers of the eight subjects and 10 mothers of infants whose ages were the same as the subjects, were given a brief description of the cry-evoking stimuli and were told to use this description as the basis in judging the recorded cries. Twelve of 96 cry samples presented to the subjects' mothers were recordings of their own child's crying. The experimenter, however, did not tell the mothers which samples were produced by their infant. Data were reported in terms of the percentage of mothers' correct responses to each sample type, and these percentages were tested for significance at the 96 percent confidence level.
Findings: The 18 mothers were generally unable to successfully match the cry samples with the three cry-evoking situations. No differential advantage was found when mothers were judging samples produced by their own infant.
Duration; 1971-completed.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Muller, E.; Hollien, H.; and Murray, T. Perceptual responses to infant crying: Identification of cry types. *Journal of Child Language*, I, 89-95.

35-LA-4 FEASIBILITY STUDY FOR A SUMMATIVE EVALUATION OF THE CHILD AND FAMILY RESOURCE PROGRAM

Investigator(s): Sheldon H. White, Ph.D., Principal Investigator; Geraldine K. Brookins, B.A., Doctoral Candidate, Project Co-Director; and Anthony S. Bryk, B.A., Doctoral Candidate, Project Co-Director, Huron Institute, 119 Mount Auburn Street, Cambridge, Massachusetts 02138.

Purpose: To determine the feasibility of executing a summative evaluation of the Child and Family Resource Program (CFRP).

Subjects: Child and Family Resource Programs at 10 sites.

Methods: The investigators defined the task of the evaluation as one of information gathering and analysis to inform decision makers about directions for summative evaluation of CFRP. CFRP embodies a complex array of services and a complex causal model which relate community and family changes to optimal child development. The sites, in operation little more than a year, were given local autonomy by the Office of Child Development. Because of these factors, value judgments about program aspects were not made prior to visits, and each site was initially approached as an individual unit; although commonalities in program operations, staffing patterns, and target populations were noted. It seemed important to ascertain (1) whether or not the sites based their operation on a specific intervention model or theory of change; (2) an operational description of the program, including the degree of individualization of program activities, level of parent participation, services families and children receive, staff characteristics, level of involvement and relationship with existing agencies, and the use and nature of needs assessment procedures; (3) a description of the sample entailing a description of the nature of family constellation, ethnic characteristics, and selection procedures; and (4) information related to pragmatic aspects of the evaluation; e.g., turnover or attrition rate, political climate towards evaluation, and the nature and availability of possible on-site comparative data. To gather information, a team of two field associates visited each site for 3 or 4 days. Program staff were interviewed. Families participating in CFRP and contact persons in agencies involved with CFRP were interviewed for their perceptions of CFRP, to ascertain the level of their involvement, and to detect any discrepancies between information received from CFRP staff members and agency personnel. In addition, proposals sent to program officials and Office of Child Development consultants' periodic site reports were reveiwed in an attempt to validate interview data.

Findings: A report was issued in which treatments across sites were described and evaluation strategies were discussed on three operational levels: the community, family, and child. The investigators concluded that (1) a rigorous summative evaluation of CFRP would be inappropriate prior to development of full program implementation in the demonstration sites; (2) since treatments vary considerably across sites, any evaluation must be undertaken on a site-by-site basis; (3) traditional evaluation paradigms may not be appropriate for individualized CFRP service programs. The substructure of services provided at each site should be examined and a discrete number of general subprograms defined; (4) since it is neither feasible nor desirable to mount a full-scale summative evaluation of CFRP, execution of a component analysis at the sites, possibly involving some program modifications, is recommended; and (5) an evaluation of the long-term impact of CFRP on children is not recommended. It is recommended that short-term efforts be channeled toward analysis of impact on families and communities.

Duration: July 1974-completed.

Cooperating group(s): Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.

Publications: A report is available from the Huron Institute.

35-LA-5 FAMILIES SEEN FROM WITHIN

Investigator(s): Gordon Shipman, Ph.D., Professor Emeritus, Department of Sociology, University of Wisconsin, Stevens Point, Wisconsin 54481.

Purpose: To portray changes in single family cultures over the past 20 years; and to examine how students during this period have assessed their families of orientation as they view them from within, including their earliest memories to the time of assessment.

Subjects: Over 1,000 students, ages 18 to 24, in an undergraduate marriage and family course, 1955-1975.

Methods: Students wrote family biographies and analyzed how their family orientation affected their personality development. Students were provided with a questionnaire containing 30 scaled items with which they could appraise certain traits of each parent; e.g., their interactional patterns, sensitivity to various verbal patterns, communication, and happiness. In addition, students were given suggestions in an outline with appropriate remarks concerning cultural background of parents, circumstances of parents in early married life, position in family constellation, interpersonal relationships, verbal patterns, psychosexual development, family rituals, sociocultural influences, courtship behavior, and the family as an interactional system. The biographical accounts of family life were numbered serially and coded by content so that a retrieval system could be used for each subject. Generalizations will be made for each subject and social changes will be noted for certain patterns in the 20-year period.

Duration: 1955-1977.

Publications: Shipman, G. The use of autobiographies in marriage education. *Marriage and Family Living*, 1962, 24(4), 393-398.

35-LA-6 GAZE DURATION FREQUENCY DISTRIBUTIONS DURING MOTHER-INFANT INTERACTION

Investigator(s): J. Craig Peery, Ph.D., Assistant Professor, Department of Family and Child Development, Utah State University, Logan, Utah 84322; and Daniel N. Stern, M.D., Associate Professor, College of Physicians and Surgeons, Columbia University, New York, New York 10027.

Purpose: To determine characteristic patterns of gaze frequency distributions, including looking and not-looking data, during mother-infant interaction.

Subjects: 10 twin infants (5 boys, 5 girls), ages 3 months. All subjects were from white, middle class, English-speaking backgrounds.

Methods: Play, bottle feeding, and spoon feeding activities were videotaped and analyzed during weekly home visits in the subjects' fourth month of life. Data were gathered as naturalistically as possible. Videotapes were observed and gazing data recorded on magnetic tape which was replayed through an interface into a computer for processing.

Findings: During all three activities, frequency distributions for gaze duration for mothers and infants approximate power functions. Questions were raised about the appropriateness of statistical techniques employed in previous studies for gaze comparison.

Duration: September 1970-completed.

Cooperating group(s): Research Foundation for Mental Hygiene; New York State Psychiatric Institute; Grant Foundation.

Publications: Peery, J. C. and Stern, D. N. Gaze duration frequency distributions during mother-infant interaction. *Journal of Genetic Psychology* (in press).

35-LA-7 A MODEL FOR TRAINING PARENTS TO MANAGE THEIR FAMILY SYSTEMS USING MULTIPLE DATA SOURCES AS MEASURES OF PARENT EFFECTIVENESS

Investigator(s): Buell E. Goocher, Ph.D., Director; and David N. Grove, Consultant, Edgefield Lodge, Inc., 2408 S. W. Halsey, Troutdale, Oregon 97060.
Purpose: To propose and present data demonstrating the use of multiple data sources to measure effectiveness of a parent training program.
Subjects: A family: two parents and two children, ages 3 and 6.
Methods: A single subject design was used with a continuous parental data collection system with substantiation through free operant observation system (i.e., Family Observation Record) and checklists.
Findings: Multiple data systems should be employed to measure the effectiveness of behavioral intervention programs.
Duration: 1974-completed.

35-LC-1 CONSEQUENCES OF DIVORCE FOR CHILDREN

Investigator(s): Robert J. Levy, J.D., Professor; and Julie Fulton, M.A., Research Fellow Law School, University of Minnesota, Minneapolis, Minnesota 55455.
Purpose: To determine how divorcing parents arrange for child custody; to examine intervention in the divorce process by lawyers, social workers, and judges; to evaluate the impact of the custody investigation in contested cases; and to analyze how the terms of the decree affect the parents' and children's adjustment to the divorce.
Subjects: 580 mothers and fathers, who were divorced in 1970 in three urban and two rural Minnesota counties. The children involved range in age from 0 to 18.
Methods: Court records were gathered for each of the cases initially selected for sample inclusion. Personal interviews were conducted with located and consenting subjects in an open-ended, 238-question interview. In many cases, both husband and wife were interviewed. Because of the age range of children involved, parents described what they think has happened to their children during the divorce process. Custody investigations were also gathered when applicable. The type of divorce process was the independent variable.
Findings: Preliminary results indicated that of the first subjects selected, 72 percent were located. Of the subjects located, 61 percent agreed to be interviewed and 39 percent refused. Most respondents did not want their children to be interviewed in the subsequent phase of research. Husbands and wives differ in their response to many items.
Duration: 1970-1976.
Cooperating group(s): Ford Foundation; National Science Foundation; Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.
Publications: (1)Levy, R. J. and Fulton, J. The organization and management of law and social science research: Divorce and custody study. *The North Carolina Law Review*, June 1974, 52, 999-1012. (2) A tape recording, "The Fragmented Family," is available from Edutape Series, National Council on Family Relations, 1219 University Avenue, S.E., Minneapolis, Minnesota 55414.

35-LC-2 CHILDREN IN ONE-PARENT FAMILIES

Investigator(s): Elsa Ferri, B.A., Senior Research Officer, National Children's Bureau, Adam House, 1 Fitzroy Square, London S1, England.

Purpose: To study the background and environment of children in one-parent families; and to assess the effects of one-parent families on children's educational, social, and psychological development.

Subjects: 650 fatherless and 98 motherless boys and girls; and a control group of 12,000 two-parent boys and girls. Data were collected when the children were ages 7 and 11.

Methods: This research utilizes material collected for the National Child Development Study, a long-term follow-up of a cohort of approximately 16,000 children. It provides the first nationally representative sample of one-parent children. Comparisons will take into account which parent is absent and the cause of the absence.

Duration: November 1970-June 1974.

Cooperating group(s): Department of Health and Social Security, England.

35-LC-3 FATHERLESSNESS AND BEHAVIOR PROBLEMS

Investigator(s): Paul L. Adams, M.D., Professor; and Jeffrey Horovitz, M.D., Special Trainee, Department of Psychiatry, School of Medicine, University of Louisville, P. O. Box 1055, Louisville, Kentucky 40201.

Purpose: To determine the relationship of fatherlessness to children's behavior problems when economic status, ethnicity, place of residence, ordinal position, gender, and age group are controlled.

Subjects: 201 Cuban refugee white and North American black mothers and their first-born fathered or fatherless sons, ages 5 to 17. Subjects were residents in Miami, Florida. Fathered firstborn sons in the same geographic and ethnic populations were used as subjects of the control group.

Methods: A questionnaire in either Spanish or English was mailed to each mother. Questions concerning the mothers' adaptive functioning were derived from the Minnesota Multiphasic Personality Inventory. Questions about the sons' manifestation of behavior problems were derived from the Louisville Child Behavior Checklist. Descriptive statistics, including correlational techniques and analysis of variance, will be employed.

Duration: 1974-1975.

Publications: Adams, P. L. Functions of the lower class partial family. *American Journal of Psychiatry*, 1973, 129.

35-LC-4 TEACHING PROBLEM SOLVING TO SINGLE PARENT FAMILIES

Investigator(s): Elaine A. Blechman, Ph.D., Assistant Professor, Department of Psychiatry, School of Medicine, Yale University, 17 Kossuth Street, New Haven, Connecticut 06519.

Purpose: To compare and evaluate three methods of training single parents and their children to solve their intrafamilial problems effectively.

Subjects: 60 single parent families with parents of all ages and children, ages 8 to 18, self-referred and referred by social welfare agencies and private practitioners. At the time of referral, families exhibited presenting problems including deviant child behavior, and problems of adjustment to death or divorce. Subjects' single parenthood may have occurred as a result of death, divorce, separation, desertion, unwed parenthood and adoption. Quasi-single parents, those whose spouses were unwilling to participate in parenting because of alcoholism, incarceration, or psychiatric institutionalization, also were included in the sample.

Methods: Families are randomly assigned at intake to one of three groups, Family Contract Game (FC), Family Contract Game-Monetary Incentive (FCM), and Intensive Evaluation (IE). The IE group is a comparison group that receives no active treatment, but is assessed with the other two groups. The two experimental treatment groups, FCM and FC, receive identical treatment except for an incentive variable. The FC group receives social reinforcement from the therapists for successful completion of successive training criteria, while the FCM group receives token monetary reinforcement from the therapists for reaching criteria. The incentive variable tests the usefulness of small monetary incentives as a means of engaging parents and children from lower class groups in the treatment process. The major training tool being evaluated is the Family Contract Game, developed by the investigator, as a method of training parents and children to solve their problems together through a contingency contract. In family training, the game is used to elicit high levels of effective problem solving behavior and to reinforce this behavior by means of symbolic rewards (play money) to family members. Staff members reward problem solving behavior elicited by the game with social or monetary rewards. The therapist also teaches the family to implement and fade out contracts that the family wrote by means of the game. Direct observation of problem solving behavior is carried out repeatedly before, during, and after treatment under two conditions: unstructured problem solving and structured problem solving. Problem solving behavior is videotaped and coded (using a modification of Hops' Interaction Coding System) by trained raters who know nothing about treatment goals or procedures. On-task, off-task problem solving and interaction scores are computed. Problem solving data are examined as both a within-subject and between-subject variable. Other measures obtained are Devereux Adolescent/Child Rating Scales of children's behavior at school and at home, Eysenck Personality Inventories for parents and children, Minnesota Multiphasic Personality Inventory, brief intelligence tests, information about parental attitudes toward childrearing, and self-reports of problem solving effectiveness. Multiple regression analysis will be used to investigate relationships among dependent measure scores, and analysis of variance will be employed to compare treatment between groups. To insure maintenance of results in the FC and FCM groups, families are followed for 6 months after treatment. Families are trained to solve problems once a week with the game and to implement and fade out contracts on their own initiative. The effects of treatment on moral reasoning and hypothetical problem solving will be tested in half of the families.

Findings: FC and FCM groups are superior in every respect to the IE group. The FCM appears superior as a training procedure for children with deviant school and street behavior.

Duration: July 1974-July 1976.

Cooperating group(s): Connecticut Valley Hospital; Connecticut Mental Health Center; Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Blechman, E. A. The Family Contract Game: A tool to teach interpersonal problem solving. *Family Coordinator*, 1974, 23, 269-281.

35-LF-1 LABORATORY EVALUATION AND ENRICHMENT OF COUPLES AND FAMILIES

Investigator(s): Luciano L'Abate, Ph.D., Professor, Department of Psychology, Georgia State University, 33 Gilmer Street, Atlanta, Georgia 30303.
Purpose: To apply the empirical method to interventions with couples and families.
Subjects: 55 middle lower to upper class families with boys and girls, ages 6 and older.
Methods: Evaluation and enrichment techniques developed at Georgia State University are being used with families. These techniques are based on the investigator's theory of personality development in the family. Three postulates derived from the investigator's theoretical family: (1) self-differentiations, (2) priorities, and (3) congruence. Derived from the three postulates, the major goals of family intervention are (1) to increase self-differentiation among the individual members of the family; (2) to clarify, negotiate, and balance priorities; and (3) to decrease dysfunctionality and increase congruence. Measures employed consist of the Georgia State University Family Evaluation Battery and Marital Evaluation Battery.
Battery.
Duration: 1971-continuing.
Cooperating group(s): Fulton County Mental Health Department.
Publications: (1) L'Abate, L. Some observations on psychogenic role rigidities in fathers. *Journal of Marriage and Family Therapy*, 1975, 1, 77-87. (2) L'Abate, L. Family enrichment programs. *Journal of Family Counseling*, 1974, 2, 32-38.

35-LF-2 COMPREHENSIVE STUDY OF THE SPOUSE AND OFFSPRING OF THREE GROUPS OF DRUG OFFENDERS

Investigator(s): Barbara Herjanic, M.D., Assistant Professor, Psychiatry and Pediatrics, Washington University, School of Medicine, St. Louis Children's Hospital, 500 S. Kingshighway, St. Louis, Missouri 63110.
Purpose: To determine the incidence of psychiatric disorder and developmental disability in the offspring of three groups of adult drug offenders; to investigate the relationship between parental characteristics, conditions in the home, and behavior deviance of the offspring; and to form the basis for a follow-up study of high risk children.
Subjects: Children, ages 6 to 17, and wives of 26 male alcoholics, 26 drug abusers, and 26 drug addicts. Half are white and half are black families from low socioeconomic levels. Control groups of children of parents with no known addiction are used for the laboratory studies. A comparison group of pediatric clinic children is used for the psychiatric evaluations.
Methods: Each male drug offender and his spouse are given a systematic psychiatric interview and a series of psychological tests. The wife (mother) is given a systematic interview covering development, medical history, adjustment, and behavior of all her children. Each child is given a comprehensive psychiatric interview, and a series of psychological tests to determine IQ, achievement, visual-motor development, and personality characteristics. Each child is then given a series of laboratory tests to study impulsivity behavior, including eye movement during reading, reaction time, and motor overflow.

Findings: Fourteen black alcoholics and their spouses with 52 children; 8 white alcoholics and their spouses with 18 children; and 4 drug addicts and their spouses with 11 children have been studied to date (June 1975). Thirty control children have been studied. Data are being processed.

Duration: January 1974-December 1975.

Cooperating group(s): Special Action Office for Drug Abuse Prevention; Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-LG-1 EFFECTS OF PARENTS' AND PEDIATRICIANS' WORRY CONCERNING SEVERE GASTROENTERITIS IN EARLY CHILDHOOD AND LATER DISTURBANCES IN THE CHILD'S BEHAVIOR

Investigator(s): John J. Sigal, Ph.D., Research Director; and P. Gagnon, M.D., Assistant Director, Psychiatry Department, Jewish General Hospital, 3755 Cote Sainte Catherine Road, Montreal, Quebec H3T 1E2, Canada.

Purpose: To test the hypotheses that parental preoccupation with their child's illness can result in later child conduct problems, and that pediatricians can play an important role in preventing the problems.

Subjects: Experimental group: 12 boys and 13 girls, ages 8 to 12, from intact families. Subjects had been hospitalized for gastroenteritis when they were 2 to 5 years old. Control group: one sibling of each experimental subject who is nearest in age and in the same developmental phase as the subject. Subjects have had no severe illnesses or accidents (other than gastroenteritis).

Methods: Parents completed the Peterson-Quay Behavior Problem Checklist, Sigal-Chagoya Child Behavior Inventory, a questionnaire regarding any specific worries that the child might die, and a questionnaire reflecting their general state of trait anxiety. Children fill out a trait anxiety questionnaire related to their parents. Pediatricians (N = 26) rated the degree and duration of their worries and the parents' worries during and after hospitalization for gastroenteritis. From each subject's medical chart, a rating of the severity of illness was obtained.

Findings: More conduct problems and excessive dependency were found in children of parents who were specifically worried that their child might die. Other types of problems were manifested when parents rated themselves (and the children agreed) as general worriers. More conduct problems were noted in children whose illnesses were objectively more severe. Pediatricians stop worrying sooner than parents after hospitalization. When children formerly ill with nephrosis, croup, and gastroenteritis are compared, conduct problems vary directly with the degree of parental worrying as perceived by pediatricians.

Duration: September 1972-September 1974.

35-LG-2 PSYCHOSOCIAL ASPECTS OF SICKLE CELL DISEASE

Investigator(s): Sylvia M. Tetrault, Ph.D., Assistant Professor; and Roland B. Scott, M.D., Professor, Center for Sickle Cell Disease, College of Medicine, Howard University, 520 W Street, N.W., Washington, D. C. 20059.

Purpose: To provide descriptive data on selected psychosocial parameters of sickle cell patients.
Subjects: 40 sickle cell patients, ages 6 months to 16 years.
Methods: A questionnaire including a parent-child rating scale was used to interview parents of children with sickle cell disease. Special emphasis was placed on obtaining data on peer, sibling, and parent-child relationships; reactions to treatment and hospitalization; and adjustment to the disease and its symptoms. The Piers-Harris Children's Self-Concept Scale was used when appropriate.
Duration: March 1974-October 1975.

Childrearing

35-MB-1 MODIFICATION OF FAMILY INTERACTION

Investigator(s): Barclay Martin, Ph.D., Professor, Department of Psychology, University of North Carolina, Chapel Hill, North Carolina 27514.
Purpose: To develop brief intervention techniques to modify family interaction related to recurring parent-child problems.
Subjects: 50 families each with a child, age 6 to 10, who responded to a letter and brief questionnaire sent home from elementary schools and who reported recurring mother-child problem interactions.
Methods: The families were assigned randomly to one of three groups: (1) father included treatment group, (2) father excluded treatment group, or (3) control group with a 6-week wait. Assessments were made before and after treatment and at a 6-month follow-up. Treatment consisted of four to eight sessions of teaching conflict resolution skills by rehearsal, coaching and modeling, and consultation on contingency management.
Duration: June 1973-August 1975.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-MC-1 SCHOOL FOR PARENTS

Investigator(s): Marilyn Segal, Ph.D., Associate Professor, Director, Institute of Child-Centered Education, Nova University, 3001 College Avenue, Fort Lauderdale, Florida 33314.
Purpose: To measure the effects of viewing "To Reach a Child," a public television series, on the knowledge and behaviors of parents with infants; and to determine the desirability and feasibility of (1) disseminating the series to a broad audience of caregivers, and (2) developing other television programs for this audience.
Subjects: 150 middle and lower socioeconomic status parents with infants, ages 0 to 6 months.

Methods: Television Audience Study: This study utilizes a classical experiment posttest only design with random assignment to treatment and control groups. The experimental group viewed "To Reach a Child" on public television, while the control group watched a sports program concurrently. At the end of the nine-program series, viewers were interviewed in their homes and completed a questionnaire constructed by the Educational Testing Service. The second and third phases of the School for Parents study were comprised of a content analysis, need analysis, and an impact analysis of the data. Content analysis by different viewing audiences was employed to determine content validity and audience reaction to each of the nine-program segments. A panel of early childhood specialists in psychology, health, and education; community based practitioners; and media specialists viewed films and responded to a questionnaire. Need analysis determined the potential users of the programs and manual. Specifically, need analysis was designed to answer three questions: (1) What is the demand for the films? (2) What purposes can they serve? and (3) Do they fulfill the purposes intended by the users? In addition to the Television Audience Study, the impact analysis determined the effect of the series on the knowledge and behavior of four different viewing audiences: (1) day care mothers, (2) maternity and pediatric aides working in a county hospital, (3) mothers giving birth in a county hospital maternity ward, and (4) caretakers of children in day care centers with and without exposure to an infancy training program based on "To Reach a Child."
Findings: Television Audience Study: The viewing group responded favorably to the infancy film series. There were significant differences between treatment and control groups on informational questions, but not on questions involving broad developmental principles. There was also evidence of behavior changes which may be attributed to modeling in the treatment group. Partial data analyses for phases 2 and 3 indicate that the findings of the two day care field studies are consonant with the findings of the Television Audience Study. Viewing the films has been consistently associated with a significant increase in posttest scores on the total questionnaire. This increase is attributable to the informational rather than the opinion types of questions. A field study, in which viewing the films was followed by group discussion, yielded significant differences in both informational and the opinion sections of the questionnaire between pre- and posttests.
Duration: April 1973-March 1975.
Cooperating group(s): Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare; Educational Testing Service.

35-MC-2 FAMILY DEVELOPMENTAL CENTER

Investigator(s): Judith L. Lewis, M.A., Project Director, Family Developmental Center, 1855 Folsom Street, San Francisco, California 94103; and Clarence E. Richardson, M.S.W., Executive Director, Family Service Agency of San Francisco, San Francisco, California 94103.
Purpose: To evaluate a child care program specially designed to meet the developmental, educational, and emotional needs of children during their first 2 years; and to evaluate a concurrent habilitative program of intensive support and education-for-competence of the adolescent parents of the children.

Subjects: Approximately 30 families with adolescent parents, followed through the child's graduation from the Family Developmental Center at age 2, including Black, Latino, Anglo, mixed, American Indian, and Filipino families; and 12 women and 5 men teachers, ages 22 to 39, representing a wide variety of educational and vocational backgrounds.

Methods: The evaluation is based on the hypotheses that (1) adolescent parents will achieve positive gains in self-fulfillment, interpersonal relationships, coping with the external world, and their relationships with their baby; and that (2) the development of infants will be adequate or better for their age in attention, gross and fine motor development, body language, exploration, imitative learning, vocalization and expressive language, receptive language, perceptuocognitive development, competence motivation, coping with frustration, range of social responses and quality of emotional ties to adult figures, range and quality of social responses to other children, and self-awareness. Both short-term and long-range effects of specific program elements are being studied. Data were gathered on (1) family status and changes over time, (2) infant birth history and neonatal characteristics, (3) child's physical development and medical status, (4) child's psychological development, (5) maternal personality and functioning, (6) mother-child interaction, (7) paternal personality and father-child interaction, (8) siblings, (9) teachers, and (10) day care and family programs. Bayley Scales of Infant Mental and Motor Development, Bayley Infant Behavior Profile, Merrill-Palmer Scale of Mental Tests, Stanford-Binet Intelligence Scale, and the Peabody Picture Vocabulary Test were administered at the infant's appropriate age. The Adjective Check List, Edwards Personal Preference Schedule, How I See Myself, How I See My Baby, Mooney Problem Checklist, Rotter Incomplete Sentences Blank, Peabody Picture Vocabulary Test, Wide Range Achievement Test, Wechsler Adult Intelligence Scale, and an annual questionnaire were administered to parents. The Mother-Infant Interaction Situations measure was designed to examine the personality characteristics of mother and child; especially how the mother's characteristics affect their interaction. Quality of the emotional relationship, the mother's teaching effectiveness, reaction to the test situation, adaptability to child's level, attitudes toward her child's capabilities and performance, style of communication, and approach to eliciting the infant's responses were also examined. Three- and 4-year follow-ups of children graduating from the program will be conducted, and follow-up information on the family's situation and the parents' educational and vocational status will be compiled on a yearly basis. The Adjective Check List and the Edwards Personal Preference Schedule will be administered to the teachers, and the relationship between teacher personality variables and the quality of their interactions with infants will be examined.

Findings: Developmental test findings related to the center's first group of graduates indicate overall developmental progress within the normal range or better. Developmental profiles at 2 years indicate normal development in fine motor skills, imitative learning, and language abilities, and slightly above average development in perceptuocognitive functioning, competence, motivation, and gross motor skills. Based on the Peabody Picture Vocabulary Test, the intellectual functioning of the mothers as a group fell within the average range with a mean of 94.8. However, 14 percent of the mothers scored above the average range, while a disproportionate percentage of the mothers' scores fell below the average in the slow learner range (40 percent). Based on the Adjective Check List and Edwards Personal Preference Schedule, manifest needs of mothers, fathers, and female and male teachers were compared. The composite personality characteristics that emerged for the mothers included being assertive, socially active, energetic, determined, demanding of attention, reluctant to accept others' decisions, reluctant to accept blame or experience guilt, not strongly attached to friends, and not highly nurturing. The fathers differed most from the mothers along the variables of heterosexuality, counseling readiness, and need for achievement. The direction of these differences

indicates that the fathers may be more directive and controlling interpersonally. As a group the women teachers ranked low in the needs for abasement, order, affiliation, deference, and endurance; and ranked high on needs for heterosexuality, dominance, autonomy, exhibition, and change. The group of male teachers obtained low ranking scores on needs for deference, order, and endurance; and high ranking scores on needs for intraception and autonomy. The typical male teacher may be characterized as quieter, more reflective, less assertive, and possibly more dependent upon support from others and more nurturing than his female counterpart.

Duration: July 1971-June 1975.

Cooperating group(s): Children's Bureau, Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.

Publications: A final report will be submitted to the Office of Child Development.

35-MC-3 CHOCTAW HOME-CENTERED FAMILY EDUCATION DEMONSTRATION PROJECT

Investigator(s): Phillip Martin, Tribal Chairman; and Patrick Quigley, Ph.D., Project Director, Mississippi Band of Choctaw Indians, Route 7, Box 21, Philadelphia, Mississippi 39350.

Purpose: To provide a home environment to enhance the mental development of Choctaw children using the mother or near relative as teacher; to train indigenous adults to visit the families and coordinate appropriate activities; and to assess how parents' attitudes and knowledge affect children's mental development.

Subjects: 125 Choctaw families: 160 boys and girls, ages birth to 4, who are primarily Choctaw-speaking with English as a second language and are from rural, low income extended family units.

Methods: From the time of entry, each family and child serves as their own control. Weekly home visits are made. Instruments used to collect summative data include the Bayley Mental Development Index, McCarthy Scales of Children's Abilities (translated into Choctaw), Denver Developmental Screening Test, Caldwell Home Inventory (with items adapted). Experimental measures of parents' attitudes toward children, parenthood, the project, childrearing skills, and knowledge of child development were also noted. Formative data are comprised of the Choctaw Home Visitor's report, Choctaw Parent Report, and an experimental curriculum guide.

Findings: A ceiling effect was obtained for baseline measures using the Denver Developmental Screening Test alone; instrumentation was then supplemented.

Duration: September 1972-June 1976.

Cooperating group(s): Children's Bureau, Office of Child Development, Office of Human Development, U.S. Department of Health, Education, and Welfare.

SOCIOECONOMIC AND CULTURAL FACTORS

35-NA-1 SUPPORTIVE COMMUNITY SERVICES FOR AMERICAN INDIAN FAMILIES REQUIRED TO FACILITATE UTILIZATION OF COMMUNITY EDUCATIONAL SERVICES IN NEW YORK CITY

Investigator(s): Millicent A. Sakakohe Cook, A.B., Co-Program Coordinator; Michael A. Bush, A.B., Co-Program Coordinator; Gelvin L. Stevenson, Ph.D., Research Consultant; and Mignon Sauber, M.A., Director, Department of Research and Program Planning Information, Community Council of Greater New York, 225 Park Avenue South, New York, New York 10003.

Purpose: To identify the special needs of native American (Indian) children in New York City's school system and the needs of their families; and to develop specifically oriented social services and other services that will meet Indian children's needs and enrich their school experiences.

Subjects: At least 100 native American families with children in New York City's school system, selected from all children identified as native Americans by New York City public and parochial schools.

Methods: Field interviews, employing a semistructured questionnaire, are conducted with children's families. The questionnaire concerns (1) child attitudes toward and adjustment in school, (2) how schools and teachers relate to Indian people, (3) parents' educational aspirations for children, (4) child care arrangements for preschool children, (5) Indian identity and culture, (6) parent-school and community relations, (7) income and employment, and (8) health status and utilization of services. The descriptive data will be analyzed quantitatively and qualitatively.

Duration: January 1975-August 1975.

Cooperating group(s): New York City Board of Education; Office of Bilingual Education, Office of Education, Education Division, U. S. Department of Health, Education, and Welfare.

35-NA-2 RELIABILITY OF THE WEPMAN AUDITORY SCALE

Investigator(s): Janie D. Osborn, Ed.D., Assistant Professor, Department of Early Childhood Education, Columbus College, Columbus, Georgia 31907; and D. Keith Osborn, Ph.D., Professor, Department of Early Childhood Education, University of Georgia, Athens, Georgia 30601.

Purpose: To test the reliability of the Wepman Auditory Scale using both black and white testers and rural children as testees.

Subjects: Over 100 black and white rural first grade children.

Methods: The Wepman Auditory Scale will be administered to the subjects. Both forms of the test will be administered so that race of subject and race of tester can be studied. Each child will be tested by a black and by a white tester.

Duration: December 1974-September 1975.

Cooperating group(s): Oglethorpe County Elementary School.

35-NA-3 A CROSS-CULTURAL COMPARISON OF SOCIOLINGUISTIC STEREOTYPES

Investigator(s): M. Y. Quereshi, Ph.D., Professor and Chairman, Department of Psychology, Marquette University, 617 North 13th Street, Milwaukee, Wisconsin 53233.
Purpose: To compare the perceptual dimensions underlying the perception of a number of sociopolitically prominent individuals with varying degrees of prominence, popularity, social status, etc.
Subjects: Approximately 300 children, ages 14 to 16, equally divided by sex. The children were selected from two different cultures on the basis of availability and convenience, but from comparable backgrounds.
Methods: Children were selected from a certain area of the Midwest in the United States and from an urban area of one of the Asian countries. An ability test and a rating scale, both translated into the local Asian language by a person well-versed in English and the local Asian language, were administered. The English version was administered to the American children; the foreign version, to the Asians.
Findings: Data are being analyzed by means of multivariate analysis of variance and factor analysis. Preliminary results indicate that the instruments are measuring with considerable degree of consistency in both cultures.
Duration: April 1971-April 1976.

35-NB-1 INDIAN STUDENTS AND TEACHER EXPECTATIONS

Investigator(s): W. L. Larson, Ph.D., Associate Professor; and J. C. Gilchrist, Ph.D., Assistant Professor, Department of Sociology, Montana State University, Bozeman, Montana 59715.
Purpose: To determine if ethnicity (Indian versus non-Indian status) accounts for variation in teacher expectations after controlling for parental socioeconomic status, parental pressure, interest, aspirations, and students' grades, deviant behavior, feelings toward teachers and peer-friends' orientation.
Subjects: Approximately 287 Indian and non-Indian freshmen, sophomores, juniors, and seniors in rural senior high schools.
Methods: A questionnaire was employed to gather information on students' perceptions of teacher expectations and other variables used in the analysis. A Q-analysis (Davis, 1971) was used to test a series of causal models and their implications.
Findings: Ethnicity does account for teacher expectations independent of parental socioeconomic status and support and student characteristics, including the most important characteristic, students' grades.
Duration: 1970-completed.
Cooperating group(s): Montana Agricultural Experiment Station.
Publications: A paper presented at the Pacific Sociological Association Meetings, April 17-19, 1975, Vancouver, British Columbia: Larson, W. L. and Gilchrist, J. C. Indian students and teacher expectations.

35-NB-2 A COMPARISON OF TWO VOCABULARY DEVELOPMENT PROGRAMS WITH INTERMEDIATE GRADE MENOMINEE INDIAN CHILDREN

Investigator(s): Dale D. Johnson, Ph.D., Associate Professor, Department of Curriculum and Instruction, School of Education, University of Wisconsin, 225 North Mills Street, Madison, Wisconsin 53706.

Purpose: To expose Menominee children to large numbers of vocabulary words which were embedded in stories and materials written by Menominee Indians for Menominee Indian children; and to compare this approach with a conventional vocabulary approach.
Subjects: Approximately 200 intermediate grade, monolingual, low income Menominee boys and girls.
Methods: A battery of preimposed tests was given to experimental and control groups. The battery included six tests of vocabulary comprehension and attitude. The experimental approach stressed vocabulary as it relates to the history, culture, lifestyle, and environment of the Menominee people, while the control program utilized regular school textbooks and commercial vocabulary materials. Experimental and control group mean gain scores were compared using analysis of variance.
Duration: September 1974-August 1975.
Cooperating group(s): National Institute of Education, U. S. Department of Health, Education, and Welfare; Schools of Menominee County, Wisconsin.

35-NB-3 FATHERS' WORK, FAMILY RELATIONS, AND CAREER CHOICE

Investigator(s): Jeylan T. Mortimer, Ph.D., Assistant Professor, Department of Sociology, University of Minnesota, 1114 Social Sciences Building, Minneapolis, Minnesota 55455.
Purpose: To explore the interrelationships of fathers' work, socioeconomic status, and family relations; and to investigate the impact of family relationships on sons' vocational values and career decisions.
Subjects: 1,633 male freshmen, ages 17 to 18, predominantly from white collar backgrounds, entering the University of Michigan's College of Liberal Arts in 1962 and 1963; and 685 college seniors in 1966 and 1967. Subjects were participants in the 1962-1967 Michigan Student Study.
Methods: Questionnaires were administered during orientation week (1962-1963) to freshmen. Subjects assigned to the same dormitories (N = 450) constituted the bulk of a panel of 650 students chosen for further longitudinal study. The remaining subjects were chosen randomly or on the basis of entrance characteristics to insure representation of diverse students. Four years later, 150 additional students were chosen to compensate for attrition. Questionnaire data concerned socioeconomic and occupational background information, the character of family relationships (e.g., son's closeness and communication with both parents), occupational values, career choices, and attitudes. Univariate and multivariate statistics were utilized in the analysis of entry and senior year data.
Findings: There are occupationally related as well as more strictly socioeconomically determined variations in the character of father-son relationships. Closeness to the father mediates the transmission of values and affects sons' occupational decisions.
Duration: July 1974-May 1975.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare; Office of Education, U. S. Department of Health, Education, and Welfare.
Publications: (1) A paper presented at the American Sociological Association Annual Meeting, 1975 is available from the investigator: Mortimer, J. T. Social class, work, and the family: Some implications of the father's occupation for familial relationships and sons' career decisions. (2) Mortimer, J. T. Occupational value socialization in business and professional families. *Sociology of Work and Occupations*, February 1975, 2, 29-53.

35-ND-1 COMMUNITY ALCOHOLISM SERVICE: SPANISH-AMERICAN PROGRAM

Investigator(s): Charles M. Austin, B.A., Director, Consulting and Counseling Service, Seattle-First Bank Building, Suite #214, Walla Walla, Washington 99362.
Purpose: To establish an individualized alcoholism information and education program for Mexican-American migrant workers, emphasizing education of their children and other Mexican-American children at the elementary and junior high school levels.
Subjects: 1,800 Mexican-American residents and 4,000 Mexican-American migrant workers in two counties, among whom alcohol abuse is estimated as high as 50 percent.
Methods: A random survey of the permanent Mexican-American community indicated that the traditional alcohol information approach is a barrier to information seeking and client service. The project staff will create an ethnic program to reduce reluctance on the part of the Mexican-American farm laborer. All staff members, including the director, are bilingual. Staff will do field work in addition to working at the central office. Both audio and visual Spanish language materials will be placed in field areas. Individual counseling and referrals to social service agencies will be provided when indicated. Specialized elementary and junior high school programs in alcoholism education will be designed and implemented.
Duration: September 1974-August 1977.
Cooperating group(s): Alcohol, Drug Abuse, and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare.
Publications: Quarterly and yearly reports will be submitted to and will be available from the National Institute on Alcohol Abuse and Alcoholism, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-NE-1 EPIDEMIOLOGY OF LEUKEMIA IN URBAN BLACK CHILDREN

Investigator(s): Leon Gordis, M.D., Professor; Eugene Kaplan, M.D., Associate Professor; James Tonascia, Ph.D., Assistant Professor; and Betty K. White, MRA, Medical Records Administrator, Department of Epidemiology, School of Hygiene and Public Health, Johns Hopkins University, Charles and 34th Streets, Baltimore, Maryland 21205.
Purpose: To investigate temporal trends in incidence, mortality, and clinical severity at the time of onset of acute lymphatic leukemia (ALL) in white and black children in Baltimore; and to examine the association of specific environmental factors with ALL in the black population.
Subjects: Case-control study: 300 leukemic and nonleukemic children and their families.
Methods: This study will test the hypothesis that the apparent lag in the clinical and epidemiologic acute lymphatic leukemia patterns in black children compared to white children reflects a progressive change of lifestyle in blacks in recent years making it more comparable to that of whites. All cases of ALL occurring in Baltimore from 1960-1975 will be ascertained through a review of hospital records and other sources. Differential trends in rates and their relationship to demographic and social characteristics as well as clinical characteristics at the time of onset and survivorship will be examined. The case-control study of leukemic and nonleukemic children will be implemented by family interviews and laboratory tests. Control and ALL families will be compared to determine whether ALL cases differ in terms of host and environmental characteristics and whether ALL families differ from non-ALL families in blood group distribution, immunoglobulin levels, and prior experience with viral infections.
Duration: January 1975-December 1977.
Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-NF-1 EXPECTATIONS OF BEHAVIOR AND PERSONALITY CHARACTERISTICS OF CHILDREN OF DIFFERENT ETHNIC AND SOCIAL CLASS BACKGROUND BY PRESENT AND PROSPECTIVE TEACHERS

Investigator(s): Edna O. Meyers, Ed.D., Assistant Professor, Northside Center, The City College, New York, New York 10031.
Purpose: To investigate the expectations teachers have of the behavioral characteristics of children from different racial and socioeconomic backgrounds; and to determine whether differences in expectations exist at three levels of teacher preparation--beginning education students, student teachers, and teachers with 1 or more years' experience.
Subjects: 169 beginning education students; 96 student teachers; and 133 experienced teachers.
Methods: Teacher expectations were obtained through the use of a semiprojective rating form. Respondents read one of four descriptions of a 15-year-old boy, differing only with respect to the child's race (black or white) and social class (middle or lower). They then rated the boy on 28 behavioral characteristics. A 2 X 2 ANOVA was used to test the hypothesis that expectations would vary by race and social class for each of the 28 characteristics rated and for the total score which gives a measure of the degree of positive expectancy. Differences in expectations among the three responder groups were also analyzed.
Findings: While related research has indicated that teacher expectations are related to pupil background, preliminary data analysis for a pilot sample of teachers showed no such difference.
Duration: 1974-1975.

35-NG-1 THE NONVERBAL BEHAVIOR OF BLACK CHILDREN

Investigator(s): Walburga von Raffler-Engel, Ph.D., Associate Professor, Committee on Linguistics, Box 26, Vanderbilt University, Nashville, Tennessee 37203. Address correspondence to: 372 Elmington Avenue, Nashville, Tennessee 37205.
Purpose: To study black children's nonverbal behavior.
Subjects: 15 black boys and 15 black girls, ages 3 to 15, from three social classes.
Methods: A young black woman tells a story to each child, who, in turn, tells the story to another child. Interactions are recorded on videotape. The nonverbal behavior of the child as listener and as the speaker are observed. The ultimate impact of the original storyteller's nonverbal behavior on the child as a reteller will also be studied.
Findings: There are great differences among social classes. The investigator's previous findings of a developmental curve for nonverbal behavior and of the presence of strictly individual differences were confirmed.
Duration: September 1974-September 1975.
Cooperating group(s): WLAC-TV, Nashville, Tennessee.
Publications: A film will be produced and distributed by Campus Film Distributors, 20 East 46th Street, New York, New York 10017.

EDUCATIONAL FACTORS AND SERVICES

General Education

35-OA-1 EDUCATION IN TEACHER TRAINING

Investigator(s): Bertil Gran, Ph.D., Project Leader, Department of Educational and Psychological Research, Malmö School of Education, Lärarhögskolan, Fack, S-200 45, Malmö 23, Sweden.

Purpose: To explore the role of the Swedish teacher today and in the near future; and to analyze the extent to which teacher training matches teacher role requirements, in order to provide a foundation on which to plan the training of class and subject teachers.

Subjects: 70 randomly selected Swedish teachers from different levels were interviewed for a survey; 200 Swedish subject teachers were subsequently surveyed; and 750 randomly selected headmasters, directors of studies, inservice training directors, consultants at county school boards, and lecturers in Swedish schools of education responded to an evaluative questionnaire.

Methods: The project had two objectives: (1) to analyze the occupational demands, expectations, and training needs of teachers; and (2) to list and analyze existing teaching materials and their potential uses in teacher education. In addition to studying the demands and expectations made of teachers for the first objective, the investigator attempted to determine the main difficulties teachers face in their actual work situation. These results were compared with the content and design of contemporary teacher education. Official texts, interview surveys, critical incident studies, questionnaires, and systematic observations were analyzed. Curricula, statutes, instructions, and reports by Parliamentary Commissions were considered indicators of society's official expectations of teachers. Altogether, 3,400 demands on the teachers were mentioned in interviews. Two critical incident surveys were carried out: one designed to plot the problem situations confronting subject teacher trainees during their practice teaching, and another on the problem situations class teacher trainees encounter. The survey also included an analysis of the decision making process and how teachers tried to solve problem situations. An evaluative questionnaire, with teacher expectations as variables, was developed and consisted of three parts: (1) general formulations from official documents and texts, (2) concrete formulations from interview surveys, and (3) detailed situations from critical incident material. Respondents evaluated the present importance of the demands and the degree to which teacher education matches demands. Evaluative questionnaire results were factor analyzed.

Findings: Analysis of official texts indicates that (1) the most common demands in syllabi, curricula, and instructions concern the actual planning and conduct of teaching; (2) it is rare for personality characteristics to be required of the teacher (out of a total of more than 1,000 formulations, only six concern requirements in the way of personal qualities); and (3) the highest frequencies for demands on teachers are concerned with

getting to know one's pupils, collaborating with one's fellow teachers, and cooperating with the pupils' parents and guardians. Results of the interview survey indicate a high degree of unanimity between the different groups interviewed. Pupils frequently mention demands that teachers should be democratic, receptive to criticism, helpful, and positive. Concerning the types of problem situations teachers encounter, pupil welfare problems, including disciplinary matters, constitute one-third of all situations. As a rule, teachers make their own decisions and act independently without consulting anyone. When pupil welfare is concerned, teachers consider guidance to have more positive results than criticism and correction. Factor analysis of evaluative questionnaires yielded information on all the tasks required of teachers. Great emphasis is placed on aspects of the teacher's work that are related to pupil development, particularly efforts to individualize the teaching process and to concentrate on an individual pupil's difficulites. Less importance is attached to tasks outside the traditional role of the teacher, such as participation in social debate, development work inside the school, or involvement in the pupils' interests apart from teacher controlled activities. Inventories of printed material and films were made to be used in teacher education.

Duration: 1969-1975.

Cooperating group(s): National Board of Education, Sweden.

Publications: Documents are available from the investigator (in Swedish).

35-OA-2 THE BÄCKBY PROJECT: EVALUATION OF EXPERIMENTAL COLLABORATION BETWEEN PRESCHOOL EDUCATION AND THE JUNIOR LEVEL OF COMPREHENSIVE SCHOOL

Investigator(s): Stig Lindholm, Assistant Professor; Bertil Sundin, Lecturer; and Sven Bring, M.A., Assistant Project Leader, Institute of Education, University of Stockholm, Fack, S-104 05 Stockholm 50, Sweden.

Purpose: To evaluate an experiment designed to achieve common use of localities and educational collaboration between preschool education and regular schooling; and to test organizational forms other than those normally occurring in preschool and compulsory education.

Subjects: 120 nursery school children, ages 5 to 6, and five nursery school teachers, 180 junior level students (60 each in grades 1, 2, and 3) and three or four comprehensive school teachers per grade.

Methods: The objective of collaboration is to achieve greater individualization and continuity in the transition from nursery school to comprehensive school. In this context, collaboration implies the virtual elimination of the boundaries between preschool education and comprehensive school environments in the broadest sense; i.e., premises, personnel, materials, and pedagogics and methods. Collaboration is practiced in common spheres of work and in regard to preschool children who mature early and junior level children who mature late. Preparatory Swedish and mathematics teaching is provided at nursery school. Experimental personnel and junior level teaching staff hold joint conferences. Nursery school and comprehensive school share the same doctor, nurse, and psychologist; and share facilities (gymnasium, lunchroom, and staff facilities). The internal work of the nursery and comprehensive school was studied, but the investigation concentrated primarily on direct collaboration between preschool and comprehensive school education. Evaluation of the experimental activities was comprised of continuous observation throughout 1 calendar year, interviews with personnel, and administration of tests.

Findings: In regard to the internal work of the nursery school, tests did not prove that the experimental school prepares children better for compulsory schooling. Test scores, however, suggest that children with the least favorable backgrounds made the greatest progress; i.e., that participation in these experimental activities had an equalizing effect on beginners' groups. Comprehensive school teachers almost unanimously reported that they are happy with their working method, and attributed their satisfaction to the fact that teamwork enables them to share responsibility and to obtain help in solving problems. Both nursery and comprehensive school teachers experience difficulty in establishing individualized contacts with their students because there are too many students. Collaboration has enabled preschool children to familiarize themselves at an early stage with comprehensive school teachers and classrooms and to join in activities they will encounter at the junior level. The junior level pupils visit nursery school to participate in activities not normally occurring at the junior level. Children from both schools get to know and stimulate each other. Preparatory teaching in nursery school has made acclimatization to comprehensive school a smoother process. It has been demonstrated that nursery school pedagogics can make a positive contribution to work with junior level pupils with special difficulties. Important channels of communication have been opened between comprehensive and nursery schools, and as a result, personnel at both levels have discovered deficiencies in their own knowledge and working methods. Prerequisites for collaboration are appropriate building design, development of psychological aptitudes of personnel, allowance for extra staff work involved, and training and working conditions that make functioning goals of the nursery and comprehensive schools identical.

Duration: 1971-completed.

Publications: Bring, S. *Bäckby FLM School: An experiment in collaboration between preschool education and comprehensive school.* Stockholm: The Institute of Education, University of Stockholm, 1974 (Swedish only).

35-OA-3 A COMPARISON OF SOCIAL STRUCTURE AND ACTIVITY PATTERNS IN SCHOOLS OF OPEN SPACE AND TRADITIONAL DESIGN

Investigator(s): Carol Seefeldt, Ph.D., Assistant Professor, Department of Early Childhood/Elementary Education, College of Education, University of Maryland, College, Park, Maryland 20742.

Purpose: To describe and compare the social structure and activity patterns in classrooms of open space and traditional self-contained design.

Subjects: 600 first, third, and sixth grade children, randomly selected from classrooms in 10 open space schools and 10 traditionally designed schools in a northeastern Maryland county.

Methods: Systematic observational techniques and standardized testing procedures will be utilized in a pre-post paradigm to describe and compare social structure and activity patterns in classrooms of different design. The relationships between social structure; activity patterns; student reading achievement; linguistic communication; and students' race, sex, economic background, and grade level will be examined. The Katz Teacher/Child Behavior Survey, sociograms, McDaniels Inferred Self-Concept Scale, Torrance Tests of Creative Thinking, and Wrightsman Scale of School Morale are the measures that will be used. Multivariate analysis of variance will be used to analyze the data.

Duration: September 1975-January 1976.
Cooperating group(s): Anne Arundel County Public Schools, Maryland.
Publications: Results are available from the investigator.

35-OA-4 EDUCATIONAL RESEARCH IN SWEDEN WITH SPECIFIC REFERENCE TO TEACHER EDUCATION

Investigator(s): K. B. Start, Chairman, Department of Education, University of Melbourne, Melbourne, Australia.
Purpose: To study educational research, particularly teacher education research, and educational research planning in Sweden.
Methods: A 2-week intensive visit to centers of Swedish Education included meetings with professors, directors, project leaders, middle and junior rank research staff, and occasionally support staff. Institutes of Education at Schools of Education in Stockholm, Linkoping, Malmö, and Goteborg were studied.
Findings: Although Sweden is allocating increasing sums for educational research, a significant number of researchers felt they were inadequate. Figures were provided that initially appeared conflicting. The National Board of Education (NBE) figures suggest that of its total R & D funds, 80 to 90 percent was being made available, while researchers indicated that about 50 percent of the money was currently released for work outside the NBE. Obviously NBE does not distinguish between research and development; whereas, the research institutes could well do so. The system for deciding priority areas for research relied on all sources of opinion: lay, expert, political, and executive. Little criticism of the system was encountered and seemed a balanced method of procedure. The investigator felt that the current underfinancing of research in preschool areas would be rectified in the next 5 years. On the other hand, the underemphasis on teacher education would be compounded by no growth in financing over the same time. Researchers made no adverse comments on the current disbursement proportions among the areas. Dissemination is increasing, but, as has been found in every other country, the task of translating a research finding into classroom practice is rarely accomplished. The dissemination of proven beneficial research findings is as difficult as the evaluation of most innovations that have been evolved by interested groups. How to effect thorough dissemination is a critical task for the researcher, administrator, and teacher. International awareness of Swedish research has grown in the last decade because reports have been published in English. This practice should be encouraged. Swedish researchers should be encouraged to attend non-European conferences to exchange research findings. Swedish educational research is caught up, as are most countries, in the powerful sociopolitical utility of education. There is the trend away from cognitive aims toward more general developmental and social goals. It would seem that there is a move toward qualitative rather than quantitative assessment, subject opinion rather than objective score. Nowhere is this more obvious than in teacher training. Sweden has been caught up in the general drift that separates the teacher and the child. Teacher education processes are evaluated (where they are measured) by their effect on the teacher rather than on the child. The teacher education issue is confused most of all by the lack of definition of the role of the teacher in the school. An absence of a criterion for teacher effectiveness makes much of the research on teaching and teacher education meaningless. If we cannot agree on what it is we want the teacher to do in the classroom, then any course of training is almost irrelevant. This calls into question the whole teacher training program.
Duration: May 1973-completed.
Cooperating group(s): Research Bureau, National Board of Education, Sweden.

35-OA-5 AN INTERPRETIVE SUMMARY OF PRACTICAL EXPERIENCE AND RESEARCH DATA IN UTILIZATION OF VARIOUS MEANS FOR INDIVIDUALIZING INSTRUCTION

Investigator(s): Leslie J. Briggs, Ph.D., Professor, School of Education, Florida State University, 205 Wildwood Drive, Tallahassee, Florida 32306.
Purpose: To assist school personnel in considering implementation of individualized instruction by producing a report that combines information obtained from visits to schools with other resource data.
Subjects: 42 schools: students in grades K to 9 who are enrolled in individualized instruction programs in reading, mathematics, science, and social studies.
Methods: The report is based on two data sources: experiences of users of individualized methods, and researchers' development and evaluation reports. Project procedures involved systematic analysis of the research literature on theories, models, and programs of individualized instruction and on firsthand reports of the experiences of school personnel who have used various types of individualized instruction. Site visits involved direct observation of classroom procedures for children in individualized instruction programs in reading, mathematics, science, and social studies.
Findings: Many different programs for individualized instruction are operating successfully in several thousand of the nation's schools.
Duration: August 1974-April 1975.
Cooperating group(s): National Institute of Education, U. S. Department of Health, Education, and Welfare.
Publications: The final report was submitted to the National Institute of Education, U. S. Department of Health, Education, and Welfare under the title, "An interpretive study of individualized instruction in the schools: Procedures, problems, and prospects."

35-OA-6 HOME START: SPECIAL EDUCATIONAL NEEDS

Investigator(s): Kristine Adamian, B.S., Executive Director, Southwestern Community Action Program, Inc., Dodgeville, Wisconsin 53533.
Purpose: To evaluate a home bound instruction program for underprivileged, 4-year-old preschool children in four Wisconsin counties.
Subjects: 93 preschool children, age 4, in rural southwestern Wisconsin, selected on the basis of social, educational, and economic disadvantages.
Methods: The aims of the Home Start Program are to improve children's school readiness skills and to develop positive parental attitudes toward child care and education. Subjects were divided into experimental and control goups. The experimental group received home bound help from a teacher and sometimes a speech clinician for a full semester; the control group received no help. Both groups were tested immediately before and 14 weeks after the project began. The Boehm Test of 50 Basic Concepts was used to measure children's knowledge of space, time, and quantity. The Jordan Massey School Readiness Survey was utilized to measure readiness for school in five areas: numbers, visual discrimination, vocabulary, general information, and colors. Data are summarized as average group scores on both tests for the first and second testing and as the average gain per groups between first and second testings. In addition, t-tests for independent groups were run on the pre- and posttest difference scores to determine the significance between each county's experimental and control group. A poll of 30 parents

was conducted. Parents were asked what they thought about (1) the Home Start Program, (2) having a teacher instructing their child in their home, (3) the program's usefulness to their child in school, and (4) the program's worth in terms of the taxpayers' money. Parents were also questioned on their ease in talking to teachers and how the program has helped them teach their child. During the second half of the program the teachers will work with the control group.

Findings: Preliminary results suggest that, based on t-tests for independent groups, pre- and posttest difference scores on the Boehm Test were significantly different at the .001 level for all four counties. Difference scores on the Jordan Massey were significantly different at the .001 level in two out of four counties.

Duration: September 1974-June 1975.

Publications: A final report is available from the investigator.

35-OA-7 MONTESSORI AND RESPONSIVE ENVIRONMENT MODELS: A LONGITUDINAL STUDY OF TWO PRESCHOOL PROGRAMS

Investigator(s): Carol Seefeldt, Ph.D., Assistant Professor, Department of Early Childhood/Elementary Education, College of Education, University of Maryland, College Park, Maryland 20742; and Herbert W. Ware, M.A., Assistant Director, Planning, Management and Budget, Arlington Public Schools, 1426 North Quincy Street, Arlington, Virginia 22207.

Purpose: To compare the effectiveness of two different models for preschool education, the Nimnicht Responsive Environment and Montessori models, with effectiveness determined by examining general achievement, language achievement, self-concept, and readiness for school.

Subjects: 40 children, ages 3 to 4 in 1973-1974, attending a Responsive Environment preschool program; 101 children, ages 3 to 5 in 1973-1974, attending four Montessori centers; and 40 children, ages 5 to 6 in 1974-1975, selected randomly from kindergartners and first graders with no prekindergarten experience or only regular kindergarten experience.

Methods: Data are collected through individually and group administered tests, teachers' observations, and checklists on pupils' self-concepts. Instruments employed consist of the Cooperative Preschool Inventory, Peabody Picture Vocabulary Test, Metropolitan Readiness Test, SRA Achievement Tests, and Thomas Self-Concept Values Test. As appropriate, statistical tests, such as repeated measures and analysis of covariance, will be used to analyze measures on two and three variables for two and three independent groups.

Duration: September 1973-June 1977.

Cooperating group(s): County School Board, Arlington, Virginia; Virginia State Board of Education, Richmond, Virginia.

35-OA-8 DEVELOPMENT OF SELF-INSTRUCTIONAL MATERIALS IN CHILD GROWTH AND DEVELOPMENT

Investigator(s): Isabelle Valadian, M.D., M.P.H., Associate Professor of Maternal and Child Health, School of Public Health, Harvard University, 677 Huntington Avenue, Boston, Massachusetts 02115.

Purpose: To make available the results of many years of research on child growth and development in a form readily accessible to pediatricians, public health officers, nurses, social workers, school personnel, and psychologists.
Subjects: Several hundred individuals representing the target population for the materials, including providers of primary care and policy, professionals, and those in training for a variety of professions (e.g., nursing, pediatrics, nutrition, and special education).
Methods: The instructional materials have been taken through successive trials and revisions with samples of the target population. Student performance on the materials and pre- and posttests have provided the data for revisions designed to increase learning outcomes and student acceptance.
Findings: Strong student and teacher acceptance in trial use and learning outcomes consistent with the findings from other research on the use of self-instruction.
Duration: July 1970-September 1975.
Cooperating group(s): Bureau of Health Manpower Education, Public Health Service, U. S. Department of Health, Education, and Welfare; Maternal and Child Health and Crippled Children's Services, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education, and Welfare; W. K. Kellogg Foundation.

35-OB-1 CROSS-CULTURAL COMPARISON OF CAREER DEVELOPMENT CONCEPTS

Investigator(s): Jack M. Thompson, Ed.D., Director, Curricular Services, Sonoma County Office of Education, Room 111E, 2555 Mendocino Avenue, Santa Rosa, California 95401.
Purpose: To analyze differential responses of students in Switzerland, Poland, and Canada to United States career development concepts.
Subjects: 400 boys and girls, ages 13 to 18, obtained from random samples in Switzerland, Poland, and Canada.
Methods: Subjects completed a recently developed career education survey. Responses of students in each culture will be compared for differences and similarities. Data analysis will focus on comparing average scores and item analyses of differences.
Duration: August 1973-completed.

35-OB-2 CAREER ORIENTATIONS AND LIFE CHANCES OF RURAL YOUTH

Investigator(s): Harry K. Schwarzweller, Ph.D., Professor, Department of Sociology, Michigan State Univeristy, East Lansing, Michigan 48824.
Purpose: To explore trends in the career orientation patterns of rural, low-income youth; and to determine how variations in social contexts affect development of career goals and career attainments.
Subjects: 648 former high school seniors in Ontonagon County, Michigan in three cohorts including both males and females: 254 in 1957 and 1958; 193 in 1968; and 201 in 1974.
Methods: Developmental processes of the three cohorts are compared. Data are collected from self-administered questionnaires, school records, and informants. Follow-up information is obtained on subsequent career attainments of the cohorts. A social history of the county is also being constructed. A follow-up of the 1957-1958 cohort was done in 1968, and a follow-up of all three cohorts by mailed questionnaires is presently being conducted.

Findings: No significant differences were found between cohorts in levels of community satisfaction, parental support, or attitudes towards migration. Levels of academic ambition of girls increased from 1957 to 1968 and then stabilized. Ambition levels of boys have markedly decreased since 1968.
Duration: October 1973-October 1976.

35-OB-3 IMPROVING LEARNING EXPERIENCES FOR DISADVANTAGED CHILDREN

Investigator(s): Vernon L. Replogle, Ed.D., Director; Paul Dohrmann, Ph.D., Assistant Director; and George McCoy, Ph.D., School Psychologist, Metcalf Laboratory School, Illinois State University, Normal, Illinois 61761.
Purpose: To identify needs or problems students have to an unusual degree; and to prepare and evaluate programs of action to alleviate the student needs identified.
Subjects: 425 middle class elementary school boys and girls, ages 5 to 14, including 75 children in special education classes.
Methods: Staff members completed a 47-item needs survey for each child they knew well indicating whether a child had a problem or need to an unusual degree. The survey covered needs or problems concerning physical, emotional, social, self-concept, school behavior, school achievement, and home situation needs. Results were analyzed and reported back to teachers. The teacher(s) then selected an intervention procedure to use with selected pupils. Intervention approaches included (1) one or more teachers working intensively with a single child, (2) one or more teachers working intensively with a group of children with similar or identical problems, (3) using peer ideas and suggestions for helping a child, (4) teacher(s) and parents working cooperatively to help a child, (5) counseling and group therapy, (6) altering the curriculum to meet the needs of specific pupils, and (7) training of teachers by a counselor to become more effective leaders in classroom meetings and/or discussion groups for building all pupils' self-esteem. Pre- and postsurveys of needs were completed for all children for whom intervention procedures were applied. Assessment of student progress was based on teachers' judgments.
Duration: September 1973-August 1975.
Cooperating group(s): Illinois Board of Higher Education; Laboratory Schools of Mid-West Academic Affairs Conference of Midwestern University.
Publications: Replogle, V. L.; Lautenschlager, H.; and Dohrmann, P. *Laboratory School Journal,* 1974, 4(1), 3-71.

35-OB-4 FACTORS INFLUENCING THE SCIENCE CAREER PLANS OF HIGH SCHOOL STUDENTS

Investigator(s): Arline C. Erlick, D.Ed., Editor, Purdue Opinion Panel; and William K. LeBold, Ph.D., Director, Engineering Education Research Studies, Purdue University, ENAD 402, West Lafayette, Indiana 47907.
Purpose: To obtain information on high school students' reasons for choosing to pursue or not to pursue science careers; and to conduct a survey of high school students in order (1) to determine their educational and occupational aspirations, (2) to relate present school experiences to educational and occupational expectations, and (3) to relate parental influences to career expectations.

Subjects: 2,000 high school students (grades 10, 11, and 12) comprising a national sample stratified on the basis of sex, grade, rural or urban residence, and region. The subjects were chosen from 9,000 survey respondents attending public and private secondary schools throughout the United States.
Methods: Data were obtained by a sample survey which employed a specially prepared questionnaire. The questionnaire was administered by school personnel during the normal course of the school day. Questions were compared according to students' sex, grade, future plans, course grades, region, and gravitation toward or away from science. Responses were compared between students in schools with innovative science programs and those in schools with traditional science programs.
Findings: In general, respondents revealed positive attitudes toward scientific issues, female career roles in science, as well as many school subjects. Half of the respondents had considered science careers (57 percent of the males and 41 percent of the females). Males showed more bias than females toward female career roles.
Duration: July 1974-September 1975.
Cooperating group(s): National Science Foundation.
Publications: Erlick, A. C. and Lebold, W. K. Factors influencing the science career plans of high school students. *Report of Poll 101* (Purdue Opinion Panel), 1975, 34.

35-OB-5 BEHAVIOR MANAGEMENT TRAINING FOR CHILD CARE WORKERS

Investigator(s): William Zangwill, M.A.T., Family Consultant; Buell E. Goocher, Ph.D., Director; David N. Grove, Ph.D., Consultant; and Morrie Weitman, Ph.D., Consultant, Edgefield Lodge, Inc., 2408 S. W. Halsey, Troutdale, Oregon 97060.
Purpose: To measure some effects of training on child care workers' performance with children, ages 6 to 13, in day care settings.
Subjects: 11 men and women, ages 18 to 40, who are child care workers with varying degrees of educational and professional experience.
Methods: The study consists of pre-, post-, and 60-day follow-up measurements utilizing structured behavioral observation instruments of staff interacting with children and attitudinal assessments of specified children. For assessment, the staff used the Walker Problem Behavior Identification Checklist and staff ratings of input to and impact on agency, supervisors, and children. A matched sample of staff worked at three control centers.
Findings: Previous findings in pilot projects indicate positive changes in staff-child interactions and in attitudes toward specified children.
Duration: May 1975-September 1975.

35-OB-6 CROSS-AGE MENTAL HEALTH SERVICES

Investigator(s): Walter S. Lee, Ed.D., Psychologist, Project Director; and Robert J. Maher, B.A., Counselor, Project Coordinator, Tamalpais Union High School District, Larkspur, California 94939.
Purpose: To provide (1) early identification and direct mental health resources to assist elementary school age children with current or incipient emotional or adjustment problems, and (2) opportunities for high school students to explore careers and experiences in the mental health fields and to work directly with younger children.

Subjects: Two male and seven female high school (11th or 12th grade) students, whose prior school achievement and grade point average ranged from low-average to superior; and 27 elementary school (3rd to 7th grade) children, the target group, who were referred by the school staff on the basis of observed or potential emotional and/or adjustment problems in school. Almost all were doing poorly in terms of academic success. A control group of 27 children was used for comparion.

Methods: The high school students completed a 4-week summer training workshop, which included basic nondirective counseling techniques, communication skills, and information on community mental health services and resources. During the fall semester, each high school student completed a field work assignment, which included counseling and role modeling, with one to four younger children. A semester practicum seminar was completed concurrent with the field work. Elementary children (N = 54) were evaluated on a behavioral rating scale and assigned randomly to the experimental or control group. Each of the 27 children in the experimental group received the services of a cross-age mental health services counselor, daily to weekly, depending upon need and schedule. Eight different measures were obtained of changes in high school students, changes in elementary children, and overall project effectiveness. Data were analyzed on a pre-post, experimental-control design.

Findings: The target experimental group demonstrated positive change at the .001 level of confidence on both pre-post and experimental-control comparisons. The high school experimental group demonstrated positive change in counseling skills, knowledge of mental health resources, and attitudes about careers in the mental health fields. Because of some methodological problems (staff communication, scheduling, cooperation), elementary administrators either (1) felt unable to evaluate the overall project, or (2) rated its overall effectiveness as only fair.

Duration: February 1974-June 1975.

Cooperating group(s): Marin Association for Mental Health; California State Department of Mental Hygiene; San Anselmo School District; Fairfax School District.

Publications: Information about the project is available from the investigators.

35-OD-1 SURVEY OF 50 STATES CONCERNING TRAINING IN ADAPTED PHYSICAL EDUCATION, REQUIRED OR RECOMMENDED, FOR THOSE WHO WOULD TEACH PHYSICAL EDUCATION IN EACH STATE

Investigator(s): Agnes M. Hooley, Ph.D., Professor, Physical Education and Recreation Department, Bowling Green State University, Bowling Green, Ohio 43403.

Purpose: To learn present practices in adapted physical education for physical education teachers; and to discover how the area of adapted physical education has changed since a similar study in 1964.

Subjects: 50 states of the U.S.A.

Methods: A survey was conducted among top educators of each state to ascertain each state's requirements or recommendations for adapted physical education. Adapted physical education is defined as "physical education, modified in time, space, game rules, equipment, etc., so that handicapped persons, especially children, may take part." A questionnaire was mailed and follow-up continued until all states responded. Each state's anonymity was guarded, regardless of the strength or weakness of their training program in adapted physical education.

Findings: In 13 states, physical education teachers are required to take an adapted physical education course. An adapted P.E. course was recommended in 16 states and neither required nor recommended in 21 states. With regard to field work in the adapted physical education course, 16 states require field work, 6 do not, 10 make it discretionary, and others answered vaguely or abstained. Titles for the adapted physical education course vary: they include Adapted Physical Education; Adapted/Corrective Physical Education; Adapted Physical Education /Kinesiology; Adapted Physical Education/ Correctives or Corrective Physical Education; and Remedial Physical Education.
Duration: Fall 1974-winter 1975.

35-OE-1 IMPACT OF CREATIVE WRITING AND THE OTHER ARTS ON LITERACY

Investigator(s): Steven Schrader, M.F.A., Director, Teachers and Writers Collaborative, 490 Hudson Street, New York, New York 10014; and Sylvia Scribner, Ph.D., Psychologist; and Elsa Bartlett, Ph.D., Psychologist, Rockefeller University, 66th and York Avenue, New York, New York 10021.
Purpose: To assess the impact of a comprehensive writing/arts program on the literacy skills of elementary school children, particularly on changes in the children's writing.
Subjects: 225 elementary school boys and girls, ages 8 to 11. The children are often problem children (slow readers, short concentration spans, disruptive).
Methods: Teachers and Writers Collaborative developed an arts-in-education model at two elementary schools in Manhattan using professional writers, artists, and filmmakers to examine and document the impact of creative writing and the other arts on literacy. The study intends to show that (1) creative writing and the other arts can be used as major remedial tools in teaching literacy skills; (2) the writing/arts workshops can generate reading materials, curriculum units, and other materials that can be used to develop literacy skills; and (3) a variegated, indepth arts program will improve school attendance and general school performance, particularly of children with problems. An integrated arts curriculum will be developed to allow for maximum interweaving of the arts and with the rest of the school curriculum. Two teams of professional writers and artists (eight in all) will work closely together and with classroom and reading teachers, building on two highly successful pilot projects set up by Teachers and Writers Collaborative at two elementary schools during the past 3 years.
Findings: The writers and artists who have conducted intensive writing/arts workshops in New York City schools have observed that many of the children became intensely involved in the projects, acquired work discipline, acquired obvious pleasure and pride in their work, improved attendance and behavior, and at the same time, made noticeable jumps in reading scores and in school work in general.
Duration: October 1974-February 1976.
Cooperating group(s): National Institute of Education, U.S. Department of Health, Education, and Welfare.

35-OF-1 PRESCHOOL ASSESSMENT AS A PREDICTOR OF HIGH RISK CHILDREN

Investigator(s): W. L. Chovan, Ph.D., Associate Professor, Department of Psychology, Western Carolina University, Cullowhee, North Carolina 28723.

Purpose: To assist teachers and parents in early identification of children with learning deficits; and to design remedial and intervention strategies for learning deficits.
Subjects: 217 boys and girls, ages 4 to 6, predominantly white Appalachian children.
Methods: This is a correlational study involving a follow-up of children's academic progress in the first and second grades. Individual and group assessment, observation, and interview methods are used. Assessment measures consist of the Wechsler Preschool Primary Scale of Intelligence, Illinois Test of Psycholinguistic Abilities, Wide Range Achievement Test, and primary reading profiles. Individual tests employed with modified administrative procedures revealed a significant savings in time and correlated well with actual raw scores for subtests. A psychograph was also designed for this study.
Findings: Preschool experience, i.e., at least 6 months of organized activity, have little or no effect on a variety of test performances.
Duration: April 1974-August 1976.
Cooperating group(s): Jackson County School System, North Carolina.

35-OF-2 SIX-YEAR FOLLOW-UP STUDY OF MONTESSORI EDUCATION

Investigator(s): Dorothy June Sciarra, Ed.D., Associate Professor; and Anne Dorsey, M.Ed., Instructor, Arlitt Child Development Center, University of Cincinnati, 2535 Dennis Street, Cincinnati, Ohio 45221.
Purpose: To examine the effects of children's early and continued exposure to Montessori education on their later academic achievement.
Subjects: 77 boys and girls, predominantly black children, ages 8.1 to 9.8, from lower socioeconomic classes, randomly selected for Montessori experience or no Montessori experience.
Methods: Subjects were divided into four groups based on their educational experience: (1) children with 4 years of Montessori, both preschool and primary, (2) 2 years of Montessori preschool only, (3) 1 year of Head Start, and (4) no preschool. Metropolitan Achievement Test (MAT) scores were compared when subjects were in third grade. Rankings of the four groups on the MAT scores were compared with a binomial test. Analysis of variance and t-tests were employed to check for significant differences on MAT subtests.
Findings: Children who attended 4 years of Montessori classes scored higher on all subtests of the MAT and scored significantly higher on word analysis and math problem solving.
Duration: 1965-1975.
Cooperating group(s): Cincinnati Montessori Society; Cincinnati Public Schools.
Publications: *The American Montessori Society Bulletin*, Autumn 1974, 12(4).

35-OG-1 CHARACTERISTICS OF SUCCESSFUL AND UNSUCCESSFUL CHILDREN IN THE OPEN CLASSROOM

Investigator(s): Patricia B. Campbell, Ph.D., Assistant Professor; and Dorothy C. Newman, M.Ed., Research Associate, Department of Education Foundations, Georgia State University, University Plaza, Atlanta, Georgia 30303.

Purpose: To examine the appropriateness of open education for elementary school children by determining the characteristics of children who are successful and unsuccessful in open classrooms.
Subjects: 91 teachers in the metropolitan Atlanta area who teach or have taught within the last 3 years in a public school elementary open classroom. The teachers were enrolled in master's level education classes at Georgia State University.
Methods: Subjects completed a questionnaire that involved listing five characteristics of successful and unsuccessful children in elementary open classrooms. Subjects were also asked to define success and lack of success in an open classroom. Questionnaire results are being used to construct an observation scale of children's behavior and characteristics to predict success or failure in an open classroom. The scale will be cross-validated through classroom observations, and reliability will be established.
Findings: Teachers indicated that children who are successful in open classrooms are self-motivating (listed by 51 percent of the respondents), able to work independently (43 percent), cooperative (35 percent), responsible (23 percent), self-disciplined (23 percent), curious (22 percent), independent (20 percent), flexible (19 percent), and mature (19 percent). Children unsuccessful in open classrooms are easily distracted (34 percent), have emotional problems (31 percent), are immature (30 percent), are slow learners or have learning disabilities (29 percent), are hard to motivate (27 percent), are dependent (27 percent), need teacher supervision (25 percent), are hyperactive (20 percent), have little self-discipline (20 percent), and are disruptive (19 percent). Definitions of success and lack of success in an open classroom appeared to be restatements of the lists of characteristics with success most often defined in terms of a child's achievement through independent work (42 percent) or a child's ability to achieve according to his or her own rate, abilities, and interests (30 percent). Lack of success was most often defined in terms of a child's dependence on resources other than himself in order to achieve (45 percent).
Duration: January 1975-June 1975.
Cooperating group(s): Cobb County School District, Georgia.

35-OG-2 AUTHORITY IN THE JUNIOR HIGH SCHOOL

Investigator(s): Mary Haywood Metz, Ph.D., Assistant Professor, Department of Sociology, Earlham College, Richmond, Indiana 47374.
Purpose: To understand the operation and tensions of secondary schools using empirical generalizations from the sociological study of organizations; and to investigate the relevance of teachers' and students' conceptions of authority for classroom and corridor interaction.
Subjects: Four junior high schools with about 1,000 students chosen to include a wide socioeconomic range, a mixture of races, and white students of Appalachian background.
Methods: An ethnographic method is used. Data are gathered from extensive classroom observations; participant observations among adults; open-ended interviews with students, teachers, counselors, and principals; and collection and analysis of documents.
Findings: If students distrust the school's good faith, opposite strategies are most efficient for ensuring good order and for inducing learning. Classroom authority revolves around common attachment to a set of goals which justify a relationship of command and obedience between teacher and student.
Duration: September 1974-December 1975.
Cooperating group(s): National Institute of Education, U. S. Department of Health, Education, and Welfare.
Publications: A final report will be filed with the National Institute of Education.

38-OG-3 PARENTS' AND TEACHERS' PERCEPTIONS OF ELEMENTARY SCHOOL PUPILS' SPECIAL NEEDS

Investigator(s): George McCoy, Ph.D., Professor, Department of Psychology, Illinois State University, Normal, Illinois 61761.

Purpose: To enable teachers to respond more effectively to children's school adjustment problems by identifying problems of greatest concern for parents and teachers.

Subjects: Parents of 431 children and 19 regular and 17 special teachers in a university elementary laboratory school.

Methods: Parents and teachers completed a 48-item checklist, identifying educationally significant problems for their children or students. The checklist sampled seven major problem areas: (1) physical, (2) emotional, (3) social, (4) self-concept, (5) school behavior, (6) school achievement, and (7) school-home situation. Pupils identified by a parent or teacher as having an educationally significant problem were grouped according to age, sex, occupational class of head of household, and position in the sibling group. Parents' and teachers' responses for each pupil were tabulated and compared on the basis of percent of perceived problems in each of the seven checklist areas.

Findings: A total of 689 checklists (83.6 percent) were returned by parents. No problems were indicated on 404 lists, and 285 reported one or more problems (average of 3.4). The average number of problems identified by teachers was 3.2. Teachers and parents tended to agree more than disagree regarding perceived problems. Agreement between teachers and parents was absolute for almost half of the 48 problems on the checklist, and for most others, there was agreement on the major problem area. Teachers and parents identified nearly twice as many problems for boys as for girls, identified problems in the school achievement area with the greatest frequency, and identified the most problems for children in terminal sibling positions. Problems in mutual home and school support were consistently the least frequent of all problems reported. This finding was not influenced by any other variables considered in the study and held firm, even though parents and teachers reported more than an average of three problems for each child identified. This suggests a much greater degree of harmony between school and home, at least with regard to educationally significant problems, than is often assumed. Teachers identified social and school achievement problems with equal frequencies; whereas, parents reported school achievement problems twice as frequently as for the next highest problem area. Teachers and fathers saw a peak incidence of problems for pupils in the 9 to 11 age group, but mothers reported the highest number of problems for children ages 12 to 14. Individual mothers perceived almost three times more problems for boys than for girls. Findings tended to agree with other studies in showing a greater number of problems in boys than in girls and in finding that children in terminal sibling positions are most often identified as having problems. Differences in this study largely center on the importance the adults assigned to school achievement. Social-emotional adjustment problems are often cited in other studies as most prevalent of children's difficulties. Such beliefs may emanate from studies by mental health workers or from investigations with mental hygiene orientations. It's possible that educational problems appear earlier in development and later give way to social-emotional adjustment difficulties. This may account for the tendency of the adults in this study to report educational problems peaking at a preadolescent age, several years earlier than the generally accepted peak age for social-emotional adjustment difficulties. A final variation from the usual finding is the higher frequency of educationally significant problems found to be associated with children from homes where the head of the household is in the highest occupational group. Studies consistently related the highest incidence of adjustment difficulties to lower socioeconomic standing. It seems probable that such studies have a

mental health reference which may not be suited for the investigation of educational difficulties. Follow-up investigation by other educationally oriented researchers exploring similar school adjustment situations is needed to clarify findings of this study.
Duration: September 1973-completed.
Cooperating group(s): Illinois State Board of Regents for Higher Education, Midwestern Universities Laboratory School Consortium Special Needs of Children Project.
Publications: Single copies of the report are available from Dr. Vernon L. Replogle, Director, Metcalf Laboratory School, Illinois State University, Normal, Illinois 61761.

35-OG-4 OBSERVATIONAL STUDIES OF CHILD BEHAVIOR IN CLASSROOMS: CORRELATES OF ORAL PARTICIPATION IN CLASSROOMS

Investigator(s): Ellen F. Potter, Ph.D., Assistant Professor, College of Education, University of South Carolina, Columbia, South Carolina 29208.
Purpose: To identify child characteristics associated with varying rates of oral classroom participation; and thereby to explain individual differences in the numbers and kinds of interactions related to instruction that children have with their teachers.
Subjects: 48 Caucasian children from a suburban school system: 24 third graders and 24 fifth graders, half boys and half girls, half low and half high achievers. The subjects were selected from six classrooms and matched within classrooms for sex and achievement level.
Methods: Predictors of participation were scores on the Test Anxiety Scale for Children (TASC), Brookover Self-Concept of Ability Scale, sociometric status, position of desk in classroom, and a scale devised for this study to measure the child's perceptions of the teacher's and classmates' reaction of attempts to participate. Child behaviors observed were public discussion contacts and seatwork private interactions. Teacher's initiations were also investigated. Behaviors were assessed by classroom observation. Regression analysis was used to assess prediction.
Findings: TASC scores predicted anxiety in a positive direction, and a curvilinear relationship was found between TASC scores and participation, with children with very high and very low scores avoiding participation. Striking sex differences in prediction were found; girls who expected criticism from classmates avoided public participation.
Duration: April 1973-completed.
Cooperating group(s): University of Chicago; National Institute of Education, U. S. Department of Health, Education, and Welfare.

35-OG-5 EVENTUAL SCHOOL PLACEMENT OF KINDERGARTNERS OBSERVED IN THE CLASSROOM AS HIGH RISK

Investigator(s): Steven R. Forness, Ed.D.; Donald Guthrie, Ph.D., Department of Psychiatry; and Robert J. Hall, M.A., School of Education, University of California at Los Angeles, 760 Westwood Plaza, Los Angeles, California 90024.
Purpose: To determine, at the completion of second grade, the actual special education placement and/or risk for special education of kindergarten children.
Subjects: 94 kindergarten boys and girls, approximately half of whom were from minority groups.

Methods: Children were observed at the beginning of kindergarten according to predetermined observational categories. Cluster analysis revealed four distinct patterns of observable classroom behavior with varying probabilities of educational risk. Follow-up records of subjects at the completion of second grade were made for indications of special education referrals or placement, as well as mean *risk* ratings by three independent raters on teacher anecdotal material.
Findings: Subjects (N = 44) remained in the school (attrition rate of 53.2 percent). Statistical analyses revealed that subject attrition was randomly distributed. Cluster 1 (non-risk) subjects had the highest number of subjects in gifted programs, while Cluster 4 (high risk) contained the highest number of special education placements and highest risk ratings. Cluster 2 (mild risk) subjects had more risk indicators than were originally predicted.
Duration: October 1972-July 1975.
Cooperating group(s): UCLA Special Education Research Center; California State Department of Education.

35-OJ-1 FAMILY-SCHOOL SOCIALIZATION: PROBLEMS AND PROSPECTS

Investigator(s): Marvin B. Sussman, Ph.D., Director, Institute on the Family and Bureaucratic Society, Department of Sociology; and Elyse Fleming, Ph.D., Chairwoman, Department of Education, Case Western Reserve University, Cleveland, Ohio 44106.
Purpose: To develop a conceptual framework and appropriate methodologies for measuring educational expectations of the child by the school and family; and to examine (1) parental reactions as children increasingly come under the school's socialization system, (2) parental coping with potential and real conflicts between their own and the school's socialization methods, and (3) parents' efforts to influence the school.
Subjects: Group I: 103 mothers (21 Puerto Rican, 26 black, and 56 white), whose eldest child was entering first grade. Group II: 19 fathers from the same sample. Group III: 30 first grade teachers of the children. Parents were predominantly from a working class population, although there was a sufficient number of middle class whites to analyze the variations among classes. In addition, the sample was divided among single parent and intact families as well as single and dual career families.
Methods: During 9 months of the pilot year, beginning in August 1974, seven types of data were collected in seriatim: (1) before school began, each of the mothers was interviewed; (2) after school began, follow-up phone calls were made to the mothers; (3) one-fifth of the fathers were interviewed; (4) follow-up interviews with mothers were made 5 months after the first interview; (5) teachers were interviewed; (6) half-day classroom observations of teacher-pupil interactions were made; and (7) teachers reported social, behavioral, and academic profiles for each of the students.
Findings: Preliminary findings suggest that differences in expectations between families and schools are related to racial and cultural membership. For example, only three percent of the teachers and less than one-fifth of the white and black mothers considered reading an important duty for the family; compared with 45 percent of the Puerto Rican mothers. Of all groups, Puerto Rican mothers report that parents have the least influence upon their children. Variations between teachers and parents existed in other areas as well: over half of the teachers wanted parents to consult with them about the child's reading, while less than 10 percent of the mothers considered such an arrangement necessary. These early findings suggest that differences in socialization patterns and expectations exist between schools and families and become increasingly marked the longer the child is in school.

Duration: July 1974-June 1975.
Cooperating group(s): Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.

Specific Skills

35-PA-1 TRIAD I: COMPARATIVE STUDIES OF MATHEMATICS FOR PRIMARY AGE CHILDREN

Investigator(s): W. H. Dutton, Ed.D., Professor, Department of Education, University of California at Los Angeles, 405 Hilgard Avenue, MH 206, Los Angeles, California 90024.
Purpose: To study a new mathematics program, TRIAD I; and to compare mathematics education for primary age children in Australia, Japan, United States, Scandinavia, Germany, England, France, and Switzerland. (See also *Research Relating to Children, Bulletin 34*, September 1974-February 1975, Study 34-PA-2.)
Subjects: Children in grades K through 3 in 10 to 12 schools and 30 to 40 classrooms in Australia, Japan, United States, Scandinavia, Germany, England, France, and Switzerland.
Methods: TRIAD I is a comprehensive, developmental, beginning mathematics program based on Piaget. It is also the only existing math program with a valid and extensive evaluation component. Observation, videotapes, and teacher interviews are the primary methods used in this study.
Duration: 1969-1976.
Cooperating group(s): Comparative and International Committee and the Research Committee, Academic Senate, University of California at Los Angeles.
Publications: The investigator will complete a monograph in 1976 or 1977: Mathematics for primary-age children.

35-PB-1 METHODS OF TEACHING ENGLISH AS A FOREIGN LANGUAGE (GUME)

Investigator(s): Torsten Lindblad, Project Director; and Karl-Gustaf Stukát, Professor, Department of Educational Research, Gothenburg School of Education, Goteborg, Sweden. Address correspondence to Torsten Lindblad, Lärarhogskölan i Mölndal, Fack, S-431 20 Mölndal, Sweden.
Purpose: To construct standardized tests of English as a foreign language for Swedish elementary schools, high schools, and teacher trainees; to evaluate various aspects of testing, including test construction, repeated administrations, and test formats; and to study students' proficiency in English and factors related to their progress in acquiring English.
Subjects: Students in Swedish schools in grades 4 to 8 and I to III (gymnasium) studying English, and elementary school teacher trainees and their future pupils.

Methods: New tests for grades 6 to 8 were developed and first used in 1972 and 1973. These tests consist of 145 items (grade 6) and 150 items (grade 8) and are composed of four subtests: grammar, vocabulary, reading, and listening comprehension. The tests were carefully piloted, but standardization was made on results obtained from the full-scale administration of the tests. A preliminary version of a standardized test for gymnasium students (corresponding to high school seniors and college freshmen in the United States) was administered in 1973 and is on trial for regular use. Two diagnostic tests for elementary school teacher trainees were developed and are still administered on an experimental basis to teacher trainees and to compulsory school and gymnasium students in order to make comparisons between the trainees and their future pupils. The diagnostic tests consist of grammar and vocabulary items only; whereas, the final tests also have a classroom English section. The primary function of the final tests is to help teachers find the minimum level below which students should not be passed. In addition to test construction, a 3-year evaluation is being conducted with four groups of students: (1) grades 4 through 6, (2) grades 6 through 8, (3) grades 8 through I (first year of the gymnasium), and (4) grades I through III (three years of gymnasium). This will allow investigators to study the students progress for 9 of 10 years that Swedish students study English (7 years of which are compulsory), and to compare pupils in grades 6, 8, and I for a 3-year interval. Both oral and written tests of vocabulary, grammar, listening, and reading comprehension will be used.

Findings: The project yields two kinds of results: (1) concrete results in the form of a number of tests (described above in Methods), and (2) research results in the form of reports presenting statistical findings and recommendations for future decisions in the English as a foreign language field.

Duration: 1972-1978.

Cooperating group(s): National Board of Education, Sweden.

Publications: Several tests are available to American institutions working on foreign language testing. Project reports and booklets of test examples for grades 6, 8, and the gymnasium level will also be sent upon request.

35-PB-2 DEVELOPMENTAL DIFFERENCES IN AND STEREOTYPICAL IDENTIFICATION OF WRITTEN BLACK AND STANDARD ENGLISH

Investigator(s): Maija S. Blaubergs, Ph.D., Assistant Professor, Department of Educational Psychology, University of Georgia, Athens, Georgia 30602.

Purpose: To investigate variables such as grade level, peer pressure, stress, and register shifting to a "school code," which might control the appearance of Black English features in children's writing; and to determine how racially based expectations of teachers, linguistics, and other variables interact with the actual characteristics of papers written by children at various grade levels.

Subjects: All students in grades 4, 8, and 12 in an integrated rural Southern school district. A pilot study of rating was conducted with 64 school personnel.

Methods: All subjects were asked by their teachers to write compositions on two separate topics on two different days. The dialectic features and linguistic structures of these compositions were analyzed for their syntactical complexity using the T unit. Eight compositions, four by blacks and four by whites, were selected and matched for grade, standing in grade (low, average, high), and composition length. Raters decided whether the theme was written by a black or white child and by a fourth, eighth, or twelfth grader.

Findings: The pilot study clearly established that raters consistently identify particular themes as written by either black or white children.

Duration: 1973-1975.
Publications: (1) A paper presented at the 21st Annual Meeting of the Southeastern Psychological Association, Atlanta, Georgia, March 1975: Blaubergs, M. S. Stereotypes in the black English user. (Available upon request from the investigator.) (2) A paper presented at the 12th meeting of the Southeastern Conference on Linguistics, Washington, D. C., November 1974: Blaubergs, M. S. and Goolsby, T. Developmental differences in stereotypical identification of written "Black" and "Standard" English.

35-PB-3 A COMPUTER ASSISTED BILINGUAL/BICULTURAL TEACHER EDUCATION PROGRAM

Investigator(s): Lester S. Golub, Ph.D., Professor, College of Education, Pennsylvania State University, University Park, Pennsylvania 16802.
Purpose: To develop a computer assisted bilingual/bicultural teacher education program to prepare elementary classroom teachers to teach in bilingual programs; and to prepare a computer managed instructional system for Spanish-speaking children in a bilingual program.
Subjects: 4,000 Puerto Rican students, ages 3 to 18, from Spanish-speaking low income families.
Methods: A 10-unit bilingual teacher education program will be developed, and records of teaching performances will be tabulated. A computer managed instructional system will also be designed to chart children's progress through bilingual school programs. In addition, the program's effectiveness will be described.
Findings: Data on most teacher and student performance in bilingual programs are unorganized and lack direction.
Duration: October 1974-June 1979.
Cooperating group(s): Lancaster Area School District, Pennsylvania.

35-PB-4 TEACHING AND LEARNING ENGLISH IN WALES

Investigator(s): D. W. H. Sharp, M.A., Project Director; G. A. Bennett, M.A., Senior Research Officer; and C. L. Treharne, Research Officer, Department of Education, University College of Swansea, Hendrefoilan, Swansea, SA2 7NB, West Glamorgan, Wales.
Purpose: To develop curricula for teaching English to Welsh students based primarily on teachers' opinions and trial materials; to survey the special needs of children between ages 8 and 13 to learn English in Wales covering both first and second language approaches; and to produce handbooks for teachers.
Subjects: 250 teachers: 50 English specialists in secondary schools; and approximately 200 junior high school teachers interested in language development from six school units and nine teachers' groups.
Methods: Teachers are surveyed by questionnaire on common student errors and teaching methods. Information gathered has covered (1) errors commonly made by Welsh first language pupils in contrast to those made by English first language pupils; (2) teaching methods used in English lessons in various schools indicated by the importance attached to different activities and approaches by the teachers; (3) children's interests out of school, collected according to age groups; and (4) language textbooks and popular reading in the schools. Curriculum materials are prepared and field tested in English classes of both Welsh and English first language children.

Findings: A trial series of reading books for children, ages 8 to 10+, has been produced. Six packets for children, ages 11 to 13, containing a balance of oral and written work have been developed for a lesson series lasting 1 month. Reading materials suitable for second language pupils, ages 8 to 13, are also being developed.
Duration: September 1973-August 1977.
Cooperating group(s): The Schools Council for the Curriculum and Examinations.
Publications: Duplicate copies of reports are available from D. W. H. Sharp.

35-PB-6 THE NEW REALISM IN CHILDREN'S LITERATURE: NOT NEW, NOT REAL

Investigator(s): Jeanne Marecek, Ph.D., Assistant Professor; and Joan R. Rogers, B.A., Student, Department of Psychology, Swarthmore College, Swarthmore, Pennsylvania 19081.
Purpose: To investigate publishers' claims that modern children's literature embodies a new realism by presenting more characters to whom young children can relate; and to determine whether this new realism extends to the presentation of women in children's literature.
Subjects: 395 preschool and first grade primers and readers from 27 school reading series, published from 1968 to 1975, including (1) *Dick-and-Jane* readers (i.e., those set in middle class suburbia); (2) *urban* readers; (3) *thematic* readers (e.g., religious and health and safety series); and (4) *method* readers (linguistic, phonetic texts).
Methods: The study focuses on school readers because they are a medium to which nearly every child in the United States is exposed. All stories and poems that had clearly identified male and female characters were analyzed. Stories and poems involving groups of children or animals not distinguished as individuals were omitted. Tabulations included the number of (1) male and female protagonists, (2) males and females portrayed in assertive/aggressive roles and passive/dependent roles, and (3) male and female protagonists in stories and poems of high adventure or unusual travel.
Findings: Only 25 percent of the stories and poems had female protagonists. Nineteen percent of the assertive/aggressive roles were held by females, while 73 percent of the passive/dependent characters were female. Twenty-four percent of the protagonists of adventure/travel plots were female. Analyses of sex typing within each category of reading series were done. The findings are compared with earlier studies of children's literature to show that sex bias has not diminished appreciably as a result of consumer protest.
Duration: February 1975-June 1975.
Cooperating group(s): Rosemont College Educational Library.
Publications: A report is available from the investigator.

Special Education

35-QB-1 DEVELOPMENTAL LEARNING PROGRAM

Investigator(s): Daniel R. Prior, Ph.D., Director, Developmental Learning Program, 529 Courtlandt Avenue, Bronx, New York 10451.

Purpose: To improve the reading and math skills of children with developmental learning problems.
Subjects: 330 underachieving 1st grade boys and girls, ages 5 1/2 to 6 1/2, who are of average or near average intelligence but have perceptual problems.
Methods: After screening with the Prior Evaluative Instrument for Perceptual Development and other procedures, subjects from seven participating schools received special individualized instruction in math and reading skills by a developmental learning teacher and/or a trained paraprofessional. Students were seen individually and/or in groups of two to eight children, based on their problem area (visual-motor, auditory, and mixed or multisensory). Most classes lasted approximately 45 minutes and met two to five times a week. Teachers kept a log for each student, showing which skills had been mastered, which needed to be worked on, and the activities in which the student had participated during each period. All students in the program were pre- and posttested with the Wide Range Achievement Test (WRAT), Level I in math and reading.
Findings: Based on t-tests between pre- and posttest grade equivalent WRAT scores, the investigator concluded that there were positive gains in grade equivalent scores. In addition, the gap between subjects' mean grade equivalent and the national level decreased during the school period.
Duration: November 1973-June 1974.
Cooperating group(s): Mobiecentrics.
Publications: Publications and test materials are available from the investigator for a small mailing charge.

35-QB-2 EFFECTS OF PARAPROFESSIONALS ON ACHIEVEMENT OF YOUNG DISADVANTAGED CHILDREN

Investigator(s): Bertram Freilich, M.S.Ed., Acting Director, Pupil Personnel Services, Greenburgh Central School District #7, 475 West Hartsdale Avenue, Hartsdale, New York 10530.
Purpose: To assess the impact of employing paraprofessionals to reinforce skills taught by teachers to underachieving, traditionally high risk students; and specifically, to test the hypothesis that the impact of paraprofessionals will result in an increase of one-to-one instruction and in a decrease in interrupted teaching.
Subjects: 228 boys and 152 girls, ages 7 to 10, grades 2 to 4, identified through mental ability test scores as underachievers. The largest percentage of subjects were black pupils showing lags in reading and math skills.
Methods: Pre- and postmeasures in math and reading were obtained during a 9-month school year. Paraprofessionals reinforced pupils on a daily basis using a diagnostic, prescriptive paradigm prepared by the teacher and the learning consultant. Actual and predicted posttest gains were computed, using a hypothetical regression ratio based upon an index of monthly achievement. Anticipated vs. actual gains were computed for individual students. In addition, the frequency and quality of teaching interruptions, the amount of individual instruction, and teaching strategies (e.g., teaching, monitoring and/or management) were studied.
Findings: Actual vs. expected gains in reading and mathematics were significantly increased for second, third, and fourth grade students. One-to-one instruction increased markedly, and pupil management improved while paraprofessionals were used in the classroom.
Duration: September 1973-completed.

Cooperating group(s): Elementary and Secondary Education Act; New York State Education Department.
Publications: (1) A report is available from the investigator. (2) Frelow, R. D.; Charry, J.; Freilich, B. Academic progress and behavioral changes in low achieving students. *Journal of Educational Research*, February 1974, 67(6), 263-266.

35-QE-1 SYNTHESES, INTERPRETATION, AND EVALUATION OF RESEARCH AND DEVELOPMENT ON CREATIVE PROBLEM SOLVING FOR ELEMENTARY TEACHERS OF DISADVANTAGED CHILDREN

Investigator(s): John F. Feldhusen, Ph.D., Professor, Department of Education and Psychological Sciences, Purdue University, West Lafayette, Indiana 47906.
Purpose: To design a report on teaching creative problem solving for teachers and principals of elementary and junior high school disadvantaged children which will include instructional methods, materials, and suggestions for teachers to guide them in developing new creative problem solving activities; and ultimately to stimulate teachers of the disadvantaged to introduce creative problem solving instruction in their classes.
Subjects: 300 elementary school teachers.
Methods: Literature, techniques, and instructional materials on teaching creative problem solving were reviewed, interpreted, evaluated, and synthesized, especially as they related to teaching culturally varied and disadvantaged children. A report was prepared for teachers and principals suggesting how to use the methods and materials and discussing constraints, cost, and possible payoffs. In addition, 100 teachers were interviewed to assess their needs, problems, and concerns in teaching for creative problem solving. A questionnaire was also administered to another 200 teachers to assess their needs in this area.
Findings: Teachers need guidance in finding and evaluating instructional materials and methods for teaching creative problem solving in elementary schools.
Duration: September 1974-May 1975.

35-QF-1 HIGH INPUT PROJECT I

Investigator(s): Geraldine M. Devor, Ed.D., Project Director, High Input Projects, Contra Costa County Superintendent of Schools Department, 989 - 18th Street, Room 15, Richmond, California 94801.
Purpose: To prevent learning problems in high risk children; i.e., children who can be expected to perform poorly in elementary school.
Subjects: Experimental group: 36 children, studied from ages 2 to 5, with equal numbers of boys and girls, blacks and whites, and premature births (birthweights under 5 pounds 8 ounces) and social risks (firstborn children of teen-age mothers receiving public assistance). Control group: 12 children from middle or low socioeconomic backgrounds, including medical and social risks.
Methods: A 4 x 2 x 2 posttest only design is employed. Four groups of 12 children are randomly assigned (1) to enriched preschool only, (2) to enriched preschool and special learning sessions (Distar), (3) to enriched preschool and parent education classes, and (4) to a control group. The three treatment groups meet daily for half-day preschool sessions the year round. High Input Project (H.I.P.) objectives consist of developing

skills including (1) language: spoken vocabulary, consonant sounds, grammatical sentences, and use of plurals; (2) cognitive: spatial orientations, classification, discrimination, seriation, numeration, reading readiness, and attending; (3) affective-social: relationships to others, motivation; and (4) parent education: knowledge of childrearing and development in cognition (including language and communication skills, motor and muscle development, and affective-social development). All children receive complete physical examinations and may receive help from language specialists and speech therapists. H.I.P. formative evaluation consists of monthly observations of specific behaviors related to H.I.P. objectives and evaluations by parents of the parent education sessions. The summative evaluation includes use of a specially developed H.I.P. Child Development Scale, H.I.P. Parent Knowledge Interview, Stanford-Binet Intelligence Scale, McCarthy Scales of Children's Abilities, and the Peabody Picture Vocabulary Test. T-tests, ANOVA, and multivariate analyses are used in analyzing the data. Children will be followed through their first 4 years in grade school to determine the effectiveness of H.I.P.

Findings: On all instruments and analyses, no significant differences were found between experimental groups. This finding raises questions about the value of parent education and the Distar methodology. Based on t-tests, differences were found between the preschool and control group on the Peabody Picture Vocabulary Test ($p < .01$) and on the Stanford-Binet Intelligence Scale ($p < .025$). Employing multivariate analyses over time, significant differences were obtained between preschool and control goup on the McCarthy Scales of Children's Abilities and on the H.I.P. Child Development Scale ($p < .05$).

Duration: July 1972-June 1975.

Cooperating group(s): Contra Costa Human Resources Department; Bureau of Vital Statistics; Elementary and Secondary Education Act; Contra Costa County Medical Services, Health Department, Mental Health, Social Services, and Human Resources Department; Richmond Unified School District; local colleges and universities.

35-OH-1 EFFECT OF SENSORY INTEGRATIVE THERAPY ON LEARNING DISABLED CHILDREN

Investigator(s): A. Jean Ayres, Ph.D., Visiting Associate Professor, Department of Special Education, University of Southern California, Los Angeles, California 90505.

Purpose: To delineate the nature and types of sensory integrative deficits in learning disabled children; and to determine if therapy to remediate those deficits will improve academic learning.

Subjects: 50 experimental and 60 control subjects, largely boys, ages 6 to 10, who were identified by public schools as learning disabled (i.e., behind academically but of normal intelligence).

Methods: The following tests of sensory integration, language, and academic performance will be factor analyzed: Wide Range Achievement Test, Slosson Reading Test, Illinois Test of Psycholinguistic Abilities, and Southern California Sensory Integration Tests. All children will be given the tests initially and some of them 1 year later. The experimental group will receive 5 months' therapy; the control group will receive equivalent time of classroom experience. Changes in experimental and control group subjects' sensory integration and academic performance scores will be compared. Comparisons of responsive and nonresponsive subjects will be made to determine possible causes.

Findings: The majority of the learning disabled children show disorders of the vestibular system. Therapy normalizing that system appears to be one of the more effective means of remediating one of the underlying causes of one type of learning disorder.
Duration: January 1974-December 1976.
Cooperating group(s): Center for the Study of Sensory Integrative Dysfunction; Valentine-Kline Foundation.

35-QH-2 SURVEY OF SELECTED INFANT AND PRESCHOOL SPECIAL EDUCATION PROGRAMS IN CALIFORNIA

Investigator(s): M. Patricia Simmons, Assistant Professor; and Annette Tessier, Ed.D., Associate Professor, Department of Special Education, California State University at Los Angeles, 5151 State University Drive, Los Angeles, California 90032.
Purpose: To determine the practices and problems of California educational programs for exceptional children and their families.
Subjects: 34 responding programs throughout California: 996 physically or mentally handicapped, developmentally delayed, or emotionally disturbed children, ages 0 to 5; 133 parents; 40 teachers.
Methods: Three questionnaires were sent to 73 California educational programs for exceptional children/families. One questionnaire was aimed at program design and staff, another at teachers, and the third at parents. Items were analyzed by frequency counts, and open-ended data were summarized.
Findings: Of the 73 programs surveyed, 34 responded. Responses indicated a tremendous need for (1) centralized referral services, (2) personal counseling and support for parents, (3) dual early childhood and special education preparation for staff, and (4) assessment techniques and instruments suited to very young exceptional children.
Duration: May 1974-completed.
Cooperating group(s): California State Department; University of California at Los Angeles.
Publications: A survey, "Survey of selected infant and preschool special education programs in California," may be obtained free of charge from Special Education Research, University of California at Los Angeles, Moore Hall, Los Angeles, California 90029.

SOCIAL SERVICES

35-RA-1 AN EVALUATION OF THE INTERGOVERNMENTAL FINANCING OF CHILD WELFARE SERVICES IN MICHIGAN

Investigator(s): Gerben DeJong, M.S.W., Social Research Analyst; and Lee J. Kronenberg, M.A., Social Research Analyst, Social Services Evaluation and Analysis Division, Michigan State Department of Social Services, 300 South Capitol Avenue, Lansing, Michigan 48913.
Purpose: To determine whether the present intergovernmental system of financing child welfare services is consistent with the goals of child welfare, the need for administrative accountability, and the principles of revenue sharing.
Methods: Child welfare expenditures in the fiscal year 1972-1973 were used as the base for analysis. Expenditures were evaluated relative to various measures of need and fiscal ability to pay. The financing system was also evaluated to determine its impact on the type and range of services provided.
Findings: Preliminary results indicate that the present system of financing child welfare services is neither efficient nor equitable and at times encourages inappropriate types of child care. Alternative financing methods are needed.
Duration: Fall 1973-spring 1975.

35-RB-1 COMMUNITY RESOURCES FOR THE DEINSTITUTIONALIZED CHILD

Investigator(s): Charles R. Horejsi, D.S.W., Associate Professor, Department of Social Work, University of Montana, Missoula, Montana 59801.
Purpose: To increase practical knowledge of the factors, processes, and procedures affecting selected institutional residents' return to the community; to increase knowledge of services needed by deinstitutionalized youth and their families; and to prepare and communicate to decision makers recommendations for the development and delivery of needed services in Western Montana, a rural area.
Subjects: 70 retarded children and their parents. Youths are under age 21, both males and females, and are presently or have been residents of an institution.
Methods: A diagnostic or descriptive design is used coupled with features of community needs assessment and action research. The research approach emphasizes a process orientation; i.e., involvement of research staff in political, public, educational, and planning considerations of deinstitutionalization in a rural area. Comparison groups are used. Data are collected through personal interviews, mailed questionnaires, and participant observation. Data are also gathered from providers of services in communities and from state administrators and planners.
Duration: September 1974-August 1975.
Cooperating group(s): Children's Bureau, Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare; Boulder River School and Hospital; Western Montana Child Development Center; Montana Department of Social and Rehabilitative Services; Association for Retarded Citizens.

35-RB-2 A COMMUNITY ASSESSMENT OF EDUCATIONAL NEEDS IN EAST HARLEM AND YORKVILLE, AND OF COMMUNITY PARTICIPATION IN EDUCATIONAL DECISION MAKING

Investigator(s): Judith A. Eisler, M.S., Research Associate, Committee for a Comprehensive Education Center, 120 East 106th Street, New York, New York 10029.
Purpose: To provide feedback from segments of the East Harlem and Yorkville communities served by the Committee for a Comprehensive Education Center (CCEC) and Park East High School (PE), in order to assist the policy making bodies of these organizations to refine their goals and devise appropriate strategies to achieve them.
Subjects: 46 Park East High School students; 17 of their parents; 33 parents and educators in feeder schools; and 39 community organizations.
Methods: The issue of community participation in decision making was emphasized. Face-to-face interviews were conducted with all subjects. Recent graduates of PE interviewed present students; members of the Parents Brigade interviewed students' parents; and a former member of CCEC's Executive Committee interviewed the feeder schools' and the community organizations' staffs. Interviews were held in English and Spanish with structured interview guides that were developed by the investigator in collaboration with PE's and CCEC's governing bodies (which include students).
Duration: February 1975-June 1975.
Cooperating group(s): National Institute of Education, U. S. Department of Health, Education, and Welfare.
Publications: A copy of the final report is available from the investigator.

35-RB-3 YOUTH PROGRAM ASSISTANTS' PROGRAM

Investigator(s): Robert W. Deisher, M.D., Professor and Director, Adolescent Program, WJ-10, University of Washington, Seattle, Washington 98105; and Margaret K. Johnston, M.Ed., Chairperson, Home and Family Education Division, North Seattle Community College, 9600 College Way North, Seattle, Washington 98103.
Purpose: To design, develop, and implement a vocational-education program to train paraprofessional youth workers.
Subjects: Community college students, most of whom are under age 25; female-male ratio: approximately 3:1. To date (May 1975) seven trainees have completed the full training sequence; another 11 trainees will graduate in the summer of 1975.
Methods: The project is conducted jointly by the University of Washington and North Seattle Community College. The program incorporates a formal academic curriculum, extensive field work experience, and other intense learning experiences, in order to train adolescent specialists to meet the need for skilled personnel in youth serving agencies. The evaluation of the program has included traditional methods of curriculum evaluation, observational measurements, and extensive field work feedback. During the course of the project, each of these measures has been used to redesign and redirect the training sequence.
Duration: June 1972-June 1976.
Cooperating group(s): Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare; approximately 30 youth serving agencies in the Seattle-King County area of the State of Washington.
Publications: Preliminary data are available from Robert J. Hunner, Program Evaluator, Adolescent Program, WJ-10, University of Washington, Seattle, Washington 98105.

35-RD-1 INFORMAL ADOPTION AMONG BLACK FAMILIES

Investigator(s): Robert B. Hill, Ph.D., Director, Research Department, National Urban League, 733 - 15th Street, N.W., Suite 1020, Washington, D. C. 20005.
Purpose: To systematically describe the social, economic, and legal contexts of informal adoption among black families in order to make recommendations for improving the quality of supportive services to black and white families with informally adopted children.
Subjects: A nationally representative sample of 5,000 black families drawn from a Census Bureau Public Use Sample (1970) of a nationally representative cross-section of 50,000 black and white families. Of particular interest are families with a boy or girl, under 18 years, who is not the natural or formally adopted child (but may be a relative or nonrelative) of either the head of household or spouse. Families with foster children and minors in subfamilies are excluded from the sample.
Methods: The primary mode of investigation is a secondary analysis of 1970 Census data. Public Use Samples are selected in a stratified manner to assure a representative cross-section of the population, primarily on a household-by-household basis, thus permitting the study of family relationship and housing characteristics. Additional data are collected through the Census Bureau's Current Population Survey publications, interviews, existing records and reports, and adoption agency officials. Multivariate techniques are used to analyze the data.
Findings: There are over 2 million persons under 18, in families living with neither parent. Of these children, 39 percent are black, although blacks comprise only 10 percent of the total U. S. population. Forty-seven percent live with a grandparent, and 47 percent reside in the South. Families with informally adopted children are usually female-headed households.
Duration: June 1973-March 1975.
Cooperating group(s): Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.

35-RD-2 A FOLLOW-UP STUDY OF ADOPTED CHILDREN OF FOREIGN, NON-SCANDINAVIAN ORIGIN

Investigator(s): Vita Pruzan, Degree in Law, Research Associate; and Dorrit Schmidt, Student in Sociology, Danish National Institute of Social Research, 28 Borgergade, DK-1300 Copenhagen, Denmark.
Purpose: To determine how foreign, non-Scandinavian adopted children adjust to their new Danish family, environment, and to Danish society; and to investigate the nature of the children's adjustment problems.
Subjects: 180 mulatto adopted children, ages 8 to 12, who are mainly from South Korea and Germany and who have lived in Denmark for at least 2 years.
Methods: Cooperating parents (N = 169) were interviewed by social workers with family work experience. The family interview questionnaire concerned (1) how contact with the child was established; (2) investigations made by Danish authorities; (3) composition of the household when the child arrived; (4) description of the family situation, the adoptive child's relationships with parents, brothers, and sisters; and the child's influence on the family; (5) changes in family pattern; (6) adoptive child's relationship with friends and neighbors; (7) how parents deal with the child's problems related to being adopted; and (8) adoptive child's personality, school career, health, handicaps, and treatment. If applicable, contacts were made with advisory agencies, psychologists, psychiatric hospitals, and child welfare

agencies to obtain information. Most parents gave permission for the same social worker to interview one of the child's teachers. For each adoptive child, a child of the same sex was randomly selected from the school classroom. The same interview questions were posed about the two children, including how the child functions in class, relationship with teachers and classmates, specific problems caused by the child's color, status with respect to school knowledge, and other specific problems. Teachers also obtained a sociometric measure of adopted children's classes.
Duration: 1974-1976.

35-RE-1 FOSTER CARE COST ASSESSMENT INSTRUMENT

Investigator(s): Barbara Settles, Ph.D., Associate Professor of Family Life; James Culley, Ph.D., Assistant Professor of Business Administration; and Judith Van Name, M.S., Assistant Professor of Home Management, 100 Alison Hall, College of Home Economics, University of Delaware, Newark, Delaware 19711.
Purpose: To develop and test a procedure by which foster care agencies and associations can estimate the true cost of foster care in local areas.
Subjects: Foster care families in urban and rural areas of Delaware and Maryland.
Methods: In order to develop a foster care cost assessment instrument, actual payments for foster care in all 50 states were investigated. Estimates of costs associated with foster care were determined using cost of living indices. In addition, field research aimed at measuring foster parents' actual costs in caring for foster children were performed.
Duration: August 1974-July 1975.
Cooperating group(s): Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.

35-RE-2 CHANGING PATTERNS OF PUBLIC FINANCING OF FOSTER CARE FOR DEPENDENT AND NEGLECTED CHILDREN UNDER THE AUSPICES OF VOLUNTARY AGENCIES

Investigator(s): Ruth M. Werner, Ph.D., Professor, School of Applied Social Sciences, Case Western Reserve University, 2035 Abington Road, Cleveland, Ohio 44106.
Purpose: To investigate the changes in public policy (over the past two decades) related to foster care services for dependent and neglected children as reflected in funding patterns; and to compare information from the 50 states for the years 1957 and 1975.
Subjects: State Departments of Public Welfare in the 50 states.
Methods: This is a replication study of one completed in 1960 by the investigator. An updated questionnaire, containing the items included in the original questionnaire in 1957, will be sent to state departments in the 50 states. Returns from these questionnaires will be compared with the 1957 data.
Findings: Five patterns, representing steps on a continuum describing degrees of governmental control over public expenditures paid to voluntary agencies, are described in the publication reference listed below.
Duration: March 1975-June 1976.
Cooperating group(s): Human Services Design Laboratory, Case Western Reserve University.
Publications: Werner, R. M. *Public financing of voluntary agency foster care.* New York: Child Welfare League of America, 1960.

35-RF-1 A STUDY OF DAY CARE FOR PRESCHOOL CHILDREN

Investigator(s): Jacob Vedel-Petersen, Cand. Psych., Research Director; and Bodil Grønhøj, Cand. Psych., Research Associate, Danish National Institute of Social Research, Borgergade 28, 1300 Copenhagen K, Denmark.
Purpose: To determine if different ways of caring for Danish children during the day vary according to socioeconomic status; to obtain parents' opinions of children's and families' satisfaction with their chosen day care solution; and to estimate the need for public day care services for preschool children.
Subjects: Approximately 5,000 families with at least one child, ages 0 to 6, randomly selected from different strata of Denmark.
Methods: Parents will receive a questionnaire by mail. The questionnaire will include items on socioeconomic background, ways of caring for children in the daytime, opinions about their situation, and attitudes toward different types of day care, including caring for their children in their own home by one of the parents.
Duration: 1974-1976.

35-RF-2 DAY CARE STUDY

Investigator(s): Marilyn Segal, Ph.D., Associate Professor, Director, Institute of Child-Centered Education, Nova University, 3001 College Avenue, Fort Lauderdale, Florida 33314.
Purpose: To determine whether there are observable differences in caretaker behavior and in infant development in a day care center in which parents and aides received a training course based on the "To Reach a Child" film series.
Subjects: 12 caregivers at three infant centers; 48 infants, ages 1 to 2.3.
Methods: The Betty Caldwell Caretaker Observation Scale was used to measure caretaker behaviors on a time sampling basis. The Bayley Scales of Infant Development were used as a measure of infant development. Comparisons were made between treatment and control groups on both measures.
Duration: April 1973-December 1974.

35-RF-3 INFANT SATELLITE NURSERY PROJECT

Investigator(s): John Chantiny, Ph.D., Chairman, Department of Human Development; Marian Rauch, M.S., Director; and Doris Crowell, M.A., Research Evaluator, Infant Satellite Nursery Project, Department of Human Development, MC8-2, University of Hawaii, Honolulu, Hawaii 96822.
Purpose: To establish a cluster of family day care homes staffed by trained day care workers; to develop a curriculum to train day care workers; and to measure the impact on the children enrolled in day care homes of the care provided by training curriculum recipients.
Methods: In order to answer the question: Does training make a difference? repeated measures of the developmental progress of the children enrolled in day care homes were correlated with caregivers' achievement scores obtained at the completion of training. An observation schedule was designed to evaluate the quality of interaction between the caregivers and the children. These data were compared with ratings of children's social and emotional adjustment.

Findings: An experimental edition of a preservice training manual has been developed and is being tested. Measures on the children's development indicate gains in language and cognitive development. Interrater reliability on the observation schedule was above .80.
Duration: September 1971-completed.
Cooperating group(s): Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.
Publications: Results are available from Dr. John Chantiny.

35-RF-4 CHILDREACH: AN EXPLORATORY, DESCRIPTIVE STUDY OF DAY CARE NEEDS IN THE CITY OF LONDON

Investigator(s): Shirley A. McGowan, M.S.W., Graduate Student, Department of Epidemiology and Preventive Medicine; Carol Purdy, Student; and Jennifer Treloar, B.A., Student, University of Western Ontario, London, Ontario, Canada.
Purpose: To estimate the need for day care services in London, Ontario, Canada by determining (1) attitudes toward the provision of day care services and working mothers, (2) present patterns of care for young children, (3) parents' assessment of child care services, and (4) reasons for the use of day care.
Subjects: 1,025 families with a preschool child born in or since 1968, obtained from the tax rolls of the regional assessment office and comprising a 10 percent sample of 610 polling districts.
Methods: Questionnaires were mailed to each family. Within 3 weeks of the initial mailing, follow-up telephone calls were placed. Data were analyzed with SPSS, a statistical package for the social sciences. A limited number of interviews were conducted with working mothers who use day care services and with women who provide child care in their homes. Interview data were used as anecdotes to amplify the presentation of findings.
Findings: Of the 1,025 questionnaires mailed, 957 reached their destination and 389 families (40.6 percent) responded. Although a majority of the respondents was not in favor of mothers who have young children working outside the home, most respondents emphasized the need for day care services. At least 80 percent of young children needing care are in private, unsupervised arrangements and not in day care centers. The quality of child care services is generally good, but there are many problems involved in finding services. Day care services are used for a variety of reasons, i.e., not just because the mother works.
Duration: May 1974-completed.
Cooperating group(s): Secretary of State; United Community Services, Day Care Committee; Canada Trust; Labatts.
Publications: Childreach: An exploratory, descriptive study of day care needs in London, Ontario. United Community Services of Greater London, Day Care Services Committee, 1974. The report is available from Mrs. Joan Hilhorst, Day Nurseries Branch, Community and Social Services District Office, 495 Richmond Street, London, Ontario, Canada.

35-RF-5 TWO DEGREES OF PARENTAL INVOLVEMENT IN A DAY CARE PROGRAM

Investigator(s): Anita K. F. Li, Ph.D., Assistant Professor, Department of Educational Psychology, University of Calgary, Calgary, Alberta, Canada.
Purpose: To determine the impact on children and adults of varying degrees of parental involvement in a day care program.

Subjects: 16 parent and child pairs: parents are students attending a vocational center for retraining; and children, both boys and girls, ages 3 to 5, attend the day care center housed in a vocational center in Calgary, Alberta, Canada.
Methods: Parents were randomly assigned to experimental and control groups. Control group parents participated in the usual parental involvement activities which included daily lunch with their children. Experimental group parents engaged in additional more intense parental involvement; e.g., group discussions on child care. The children did not receive differential treatment. The experimental period lasted 5 months. Pre- and postmeasures were obtained on the Wechsler Preschool and Primary Scale of Intelligence, Peabody Picture Vocabulary Test, Boehm Test of Basic Concepts, Stott Scale of Effectiveness, Rotter Internal-External Control Scale, and a shortened version of the Parental Attitude Research Instrument. Multivariate analysis of covariance was used.
Findings: The small sample precluded generalization. A trend in the expected direction was evident. However, experimental group children showed significant pre-post gains in the Wechsler Preschool and Primary Scale of Intelligence Performance IQ, the Peabody Picture Vocabulary Test IQ, and the Stott score, while the control children did not. No treatment effects were found for parents.
Duration: September 1973-completed.
Cooperating group(s): Alberta Advisory Committee for Educational Studies.
Publications: Data are available from the investigator.

35-RF-6 FEDERAL PRESCHOOL POLICY IN THE 1960s

Investigator(s): Bernard Greenblatt, Ph.D., Associate Professor, School of Social Work, State University of New York at Buffalo, Buffalo, New York 14214.
Purpose: To explain the historical departure from prior federal policy represented by three laws in the mid-1960s supporting day care and preschool programs.
Subjects: Individuals reported as influential in making federal preschool policy (legislators, federal officials, and officers of professional associations and national organizations).
Methods: Semistructured interviews were held with the subjects. Official documents (statutes, reports of legislative hearings, and committee reports) were analyzed. Accounts in newspapers and journals were also analyzed.
Findings: Cutting welfare costs and combatting poverty essentially legitimated federal day care and preschool legislation as serving the national interest. The legislation conflicted with the ideal of exclusively maternal early child care. A precedent was set for intensified strains between that ideal and later policy.
Duration: April 1965-April 1975.
Publications: Greenblatt, B. Federal preschool policy in the 1960s: A policy analysis. Unpublished doctoral dissertation, Brandeis University, April 1975.

35-RF-7 ASSESSMENT OF PARENTS' USES OF AND PREFERENCES FOR CHILD CARE SERVICES

Investigator(s): Suzanne Triplett, M.Ed., Coordinator of Research and Evaluation, Learning Institute of North Carolina, 1006 Lamond Avenue, Durham, North Carolina 27701; and Beatrice D. Carman, Ph.D., Chief, Monitoring and Evaluation Section; and George D. Penick, Jr., B.A., Children's Program Consultant, North Carolina Office for Children, P. O. Box 12405, Raleigh, North Carolina 27605.

Purpose: To assess the uses and preferences for child care services of North Carolina's parents.
Subjects: 763 parents of children, ages 0 to 14, randomly selected across the state.
Methods: A telephone survey was conducted of 763 families with1,373 children under age 14. Thirty-one percent of the children were preschoolers (ages 0 to 5), and 68.9 percent were school age children (ages 6 to 13). Mothers of the children were interviewed and their employment status was determined. (The children's major caretaker was interviewed if the mother was permanently or semipermanently absent from home.) Fifty-five percent of the mothers were identified as employed; 45 percent were unemployed.
Findings: North Carolina's parents are not using the type of child care arrangements they think best. For example, 44.9 percent of preschool children with employed mothers have parents who prefer a Child Care Center, yet less than half of these children are cared for in such a center.
Duration: May 1974-January 1975.
Publications: *Child care in North Carolina: A survey of parents* is available from the North Carolina Office for Children. A series of six reports deals with different aspects of the data (e.g., Report No. 1 is "Preschool children with employed mothers," and Report No. 2 is "School age children with employed mothers").

35-RH-1 PARTICIPANT OBSERVATION OF THE REORGANIZATION OF A SYSTEM OF CARE FOR HOMELESS AND DEPENDENT CHILDREN: A STUDY IN CHILD ADVOCACY

Investigator(s): A. C. Maney, Ph.D., Senior Research Sociologist, Mental Health Study Center, National Institute of Mental Health, 2340 University Boulevard East, Adelphi, Maryland 20783.
Purpose: To develop and report an understanding of those professional, bureaucratic, and political processes that affect the de-institutionalization of child care systems.
Methods: A seminar composed of members of various community, professional, reform, and social groups examined the records of the local Department of Public Welfare, listened to speakers, and dealt with agencies, including the Office of Child Development. As a result, models contrasting the components of a professionally ideal system for the care of homeless and dependent children with those of a metropolitan community's real, custodially oriented system were developed. Strategies for bringing the components of the real system into greater alignment with the ideal are now being jointly formulated and implemented by a coalition, Community Task Force on Child Welfare Reform. The principal method employed is participant observation.
Duration: 1970-1976.
Cooperating group(s): For Love of Children, Child Advocacy Law Office, Washington, D. C.

35-RH-2 THE CHILD ABUSE H.E.L.P. RESOURCE PROJECT FOR CHILDREN AND FAMILIES

Investigator(s): Curtis Decker, L.L.D., Project Director, H.E.L.P. Resource Project, Jackson Towers, 1123 North Eutaw Street, Baltimore, Maryland 21201.

Purpose: To establish and develop a coordinated statewide multidisciplinary demonstration project to deal with problems of child abuse and neglect, focusing on assisting abused and neglected children and their families; and to ameliorate problems in Maryland's child abuse services such as fragmentation of services, lack of public knowledge of services, poor access channels, and under-utilization and inefficient organization of services.

Methods: The H.E.L.P. Resource Project involves three phases: (1) initial planning and drafting of a proposal; (2) setting up the organization that will stimulate coordination of effort, determine a plan of action, and define areas of activity for Phase III; and (3) gathering data needed for action programs to begin and implement a wide range of supportive activities. The organizational structure of the project developed in Phase II consists of three major components: the H.E.L.P. Council, Resource Center, and Community Steering Committees. The H.E.L.P. Council, a voluntary, statewide body made up of organizations and agencies which represent a cross-section of the community, assists in directing the project. The primary roles of The Resource Center are planning, evaluating, and coordinating. The Resource Center performs the staff function of the project, is involved in Phase II planning and Phase III implementation activities, and will serve as a coordinating body to bring together individuals in the State of Maryland with expertise in the prevention and treatment of child abuse and neglect and providers who require assistance. Proposed project activities are (1) providing technical assistance to communities with or without functioning multidisciplinary committees on child abuse and neglect; (2) developing a computerized inventory of existing services for the prevention or treatment of child abuse; and (3) conducting a public awareness campaign to increase reporting of child abuse, to encourage potential abusers to seek assistance, and to reach every segment of the population providing services in order to inform them of the project's purposes and functions. In addition, various telephone referral systems will be examined and a 24-hour hotline will be established. Available training materials will also be assessed and curricula will be developed for training professionals, paraprofessionals, and volunteers. Other activities include (1) child advocacy, emphasizing the legal rights of abused children and their families and proposing legislation; (2) specification of criteria for inclusion of information in the Central Registry of abused or potentially abused children; (3) identification of the population at risk in order to distribute services throughout the state; (4) completion of a study to examine actual provision of service and to develop rudimentary program standards; and (5) implementation of preventive programs: comprehensive family life education programs, day care services for children and families, crisis counseling, family planning programs, screening for unusual rearing practices and for high risk families, parent aides and homemakers, and community center programs in neighborhoods.

Duration: January 1975-June 1978.

Cooperating group(s): University of Maryland Hospital; Maryland Department of Employment and Social Services, Social Services Administration; Johns Hopkins Hospital; Family Care Clinic of Sinai Hospital; Mt. Washington Hospital; Maryland Department of Health and Mental Hygiene, Preventive Medicine Administration; U. S. Department of Health, Education, and Welfare.

35-RH-3 SANTA CLARA COUNTY JUVENILE PROBATION DEPARTMENT CHILD SEXUAL ABUSE TREATMENT PROGRAM

Investigator(s): Robert Carroll, Doctoral Candidate, Probation Supervisor; Henry Giarretto, Doctoral Candidate, Principal Counselor; Dorothy Ross, B.A., Juvenile Probation Officer; and Vickie Imabori, B.A., Administrative Assistant, Santa Clara County Juvenile Probation Child Sexual Abuse Treatment Program, Juvenile Center, 840 Guadalupe Parkway, San Jose, California 95110.

Purpose: To identify possible commonalities or patterns of incest and intrafamily sexual molestation.
Subjects: 100 children, ages 3 to 17, and 100 parents self-referred or referred through agencies, including juvenile probation, local police agencies, adult probation, county rehabilitation officers, human service agencies, and community groups.
Methods: The Child Sexual Abuse Treatment Program (CSATP) is a part of the Juvenile Probation Department's team approach to the therapeutic case management of families. The program offers individual, couples, family, and group therapy to the children and families involved in incest and intrafamily molestation. A survey form is used. Data, which are sociological in nature, are taken from police reports, court reports, and counseling sessions with clients in the following categories: offense, disposition, victim, offender, spouse, family, and follow-up.
Duration: July 1971-continuing.

35-RH-4 THE CHILDREN'S VILLAGE PROJECT

Investigator(s): Joseph F. Thesing, B.A., Village Director, International Orphans, Inc., 22554 Ventura Boulevard, Suite 103, Woodland Hills, California 91364.
Purpose: To study the placement needs of physically abused children in Los Angeles, Orange, and Riverside counties in California; and to examine the possibility of developing an interdisciplinary team of professionals to advise the International Orphans, Inc. on programs and services for physically abused children.
Subjects: Target population: children, ages 4 to 10, who are victims of child abuse.
Methods: Information and service data were collected from welfare personnel in Los Angeles, Orange, and Riverside counties. Interviews were conducted with leading experts on child abuse in pediatrics and child psychiatry, directors of trauma centers, law enforcement officers responsible for the child abuse county programs, professionals actively engaged in child abuse programs in community mental health centers, executives of child care agencies, and various community leaders concerned about child abuse. Data included (1) number of cases, (2) sources of referrals, (3) existence of a central registry, and (4) existence of a coordinating body at a city or county level.
Findings: There is a need for a specialized children's residential treatment center for very young children, who are victims of abuse or repeated abuse but cannot currently adapt to foster family living or adoption, or whose parents are unwilling to relinquish the child. Other recommendations were (1) an eventual capacity of about 50 children for the Children's Village; (2) provision for long-term care for seriously disturbed children; e.g., 1 1/2 to 2½ years; and (3) early intervention for victims of child abuse or neglect, at least by ages 4 through 5.
Duration: May 1974-completed.
Cooperating group(s): Human Interaction Research Institute, Los Angeles, California; Office of Child Development, Office of Human Development, U. S. Department of Health, Education, and Welfare.

35-RK-1 MODEL FOR LOW INCOME AND CHICANO PARENT EDUCATION

Investigator(s): Hanne Sonquist, M.A., Research Director, Santa Barbara Family Care Center, 305 E. Anapamu Street, Santa Barbara, California 93101.

Purpose: To evaluate a demonstration model family care center that provides a guided but cooperative participatory bilingual and bicultural program for low income, primarily Mexican-American mothers and their preschool children.

Subjects: Experimental group: 60 Mexican-American mothers (average age, 29) with an average of two children, ages 3 months to 6 years, enrolled in the demonstration program. About one-half of the mothers are monolingual Spanish, one-fourth are monolingual English, and one-fourth are bilingual. Comparison group: Head Start mothers.

Methods: The objectives of the model are (1) to provide a program for parents and children with which they can identify and influence, and (2) to provide a new institutional type in which parents can be active and capable teachers of their children, learn about child growth and development, homemaking, interpersonal skills, and ways of using community institutions to better solve their problems. Experimental group mothers and their children attend the program 2 days a week. Mothers participate as teachers of their children and also take classes in English, Spanish, driving, and sewing. Data have been collected by interviews at regular intervals over a 3-year period. A parent-child interaction scale was developed and used to assess the experimental group mothers' interactions with their children. All interviews were bilingual, and research instruments were translated into Spanish if they were available only in English. Mothers were systematically observed in parent education classes and discussion groups.

Findings: As measured by the mother-child interaction scale, mothers' responses to their children's behavior increased greatly in the desired directions. Mothers have increased in awareness of their children's learning skills and value their increased knowledge. Mothers have increased their participation in classes, discussions, and community groups. Separation anxiety decreased markedly for both mothers and children. Although great behavioral changes were noted, little change in attitudes were noted.

Duration: January 1972-completed.

Cooperating group(s): Sociology Department, University of California at Santa Barbara.

HEALTH SERVICES

35-SA-1 THE IMPLICATIONS OF CLASS BIASES IN THE USE OF MEDICAL AND CHILD GUIDANCE SERVICES FOR CHILDREN

Investigator(s): A. C. Maney, Ph.D., Senior Research Sociologist, Mental Health Study Center, National Institute of Mental Health, 2340 University Boulevard East, Adelphi, Maryland 20783; W. T. Simons, Ph.D., Associate Professor, Department of Sociology, West Georgia College, Carrollton, Georgia 30117; and R. G. Brown, Ph.D., Professor, Department of Sociology, George Washington University, Washington, D. C. 20006.

Purpose: To develop (1) a methodology that will permit a synthesis of the vast literature on social factors in the utilization of health services and will test the methodology's relevance to the utilization of health services, (2) a theoretical model of the relationship between the physician's role and the roles of other professionals rendering health care to children, and (3) a theoretical model of the role of social factors in the utilization of health services for children.

Subjects: A sample representative of the population in a suburban county of metropolitan Washington, D. C.

Methods: Data collected in an omnibus survey of the subjects are being used to examine the relationship between variations in a family's lifestyle, parental definitions of health and illness in children, and the kind of medical care parents seek for their children. Subjects participate in a 2-hour interview. Multivariate statistical techniques, including factor analysis and canonical variate analysis, are utilized.

Duration: 1963-1975.

Cooperating group(s): National Opinion Research Center; National Health Survey.

Publications: Mental Health Study Center publications are available from A. C. Maney: (1) Maney, A. C.; Simons, W. T.; and Teper, S. A. Comparison of rates of pediatrician use by children in a suburban county sample and by children in a U. S. national sample. Mental Health Study Center Laboratory Paper Series, 1971. (2) Maney, A. C. Tabular summaries of pediatrician use as a function of a child's age and his parents' income and educational characteristics in a national sample. Mental Health Study Center Laboratory Paper Series, 1968. (3) Maney, A. C. Tabular summaries of sources of medical care for children in a suburban population as a function of family composition, social position, and mobility. Mental Health Study Center Laboratory Paper Series, 1967. (4) A paper presented at the Southern Sociological Society Meetings, Atlanta, Georgia, March 1967: Maney, A. C. and Brown, R. G. Variations in how parents view good health in children. (5) A paper presented at the Rural Sociological Meetings, San Francisco, California, August 1967: Maney, A. C. and Brown, R. G. The missing pediatrician: An hypothesis for community psychiatry in non-metropolitan areas. (6) Maney, A. C. and Brown, R. G. Social class bias in pediatric practice: Key to a professional dilemma? Mental Health Study Center Laboratory Paper Series, 1966.

35-SD-1 A COMPARATIVE STUDY OF WALK-IN OBSTETRIC PATIENTS

Investigator(s): A. C. Maney, Ph.D., Senior Research Sociologist, Mental Health Study Center, National Institute of Mental Health, 2340 University Boulevard East, Adelphi, Maryland 20783; B. B. Mongeau, Ph.D., Assistant Professor, School of Public Health Nursing, University of North Carolina, Box 2688, Chapel Hill, North Carolina 27514; and J. Yvonne Knauff, M.P.H., Nurse, West Virginia State Department of Public Health, 228 Fernwood Avenue, Weirton, West Virginia 26062.

Purpose: To contribute to the professional literature on the relationship between obstetric care and childbirth complications; and to identify high risk obstetric populations before developing programs to reduce the incidence of childbirth complications.

Subjects: (1) 19,000 obstetric admissions over a 10-year period; (2) 4,100 obstetric admissions in 1964; (3) walk-in obstetric admissions during a 3-week period in 1963; and (4) all walk-in obstetric admissions during a 6-month period in 1966.

Methods: Data for the first two samples were obtained from record surveys, while subjects in samples (3) and (4) were interviewed. Three general modes of obstetric delivery were identified and contrasted: private, clinic, and walk-in (emergency). The ramifications of the walk-in mode of obstetric delivery were explored in terms of several questions: (1) Is the medical profession's alarm over the development of this folkway in obstetrical care warranted? (2) Why are not walk-in mothers relating their obstetrical needs to the professionally approved obstetric care system? (3) If the walk-in mother has related to this system during her prenatal period, why has the continuity of care broken down?

Findings: Walk-in patients experience an unusually high rate of childbirth complications relative to the clinic or to the private obstetric patient populations. Illegitimate pregnancy increases the risk faced by a walk-in patient, but use of the emergency room at the hospital under study is potentially more dangerous for white women than for nonwhite women within both the legitimately pregnant and the illegitimately pregnant groups. The evidence is not conclusive, but there are indications that total neglect of prenatal care, alone and in combination with high parity, accounts for the correlation between the social characteristics of a walk-in patient and the probability that she will experience complications in the course of childbirth. Although virtually all of the walk-in pregnancies were unplanned because of ignorance and fatalism, almost all patients expressed a readiness for family planning services. The obstetrical clinic program at the hospital under study seemed to make real gains in prenatal service to some categories of high risk, medically dependent patients over the prior decade. White legitimately pregnant women who lived within 10 miles of the hospital, whites who lived more than 10 miles from the hospital, and the nonwhite illegitimately pregnant women (especially the primaparas) continued to be overrepresented in the walk-in population.

Duration: 1963-1975.

Cooperating group(s): Prince George's General Hospital; National Institute of Mental Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

Publications: Two laboratory reports are available from A. C. Maney: (1) Mongeau, B. B. and Maney, A. C. The walk-ins: A comparative study of women who failed to make plans for obstetric delivery. Adelphi, Maryland: Mental Health Study Center, 1974. (2) Knauff, J. Y. A study of attitudes and opinions toward birth control among walk-in maternity patients. Adelphi, Maryland: Mental Health Study Center, 1974.

35-SD-2 THE EFFECT OF INFANT AND CHILD MORTALITY AND PREFERENCE FOR SONS UPON FERTILITY AND FAMILY PLANNING BEHAVIOR AND ATTITUDES IN TAIWAN

Investigator(s): David M. Heer, Ph.D., Professor, Population Research Laboratory, University of Southern California, Los Angeles, California 90007; and Hsin-ying Wu, M.D., Director, Institute of Public Health, College of Medicine, National Taiwan University, 11 Chungshen Road South, Taipei, Taiwan, Republic of China.

Purpose: To investigate the impact on fertility of programs designed to reduce infant and child mortality in Taiwan.

Subjects: 6,814 women who have been married and 1,364 women who are currently married. Subjects were chosen from two different townships in northern Taiwan.

Methods: The method of data collection was interviews with respondents from both townships. Kungliao Township had a very high level of infant and child mortality, while Hsinchuang had a relatively low infant and child mortality. Data are analyzed using multiple classification analysis.

Findings: The death of a child results in additional subsequent fertility, but the additional fertility does not fully compensate for the death of the child. With other factors held constant, fertility is higher among women living in the high mortality township. Subsequent fertility is lower after male children among early births than after female births.

Duration: 1968-completed.

Cooperating group(s): U. S. Agency for International Development; The Population Council.

Publications: Heer, D. M. and Wu, H. The effect of infant and child mortality and preference for sons upon fertility and family planning behavior and attitudes in Taiwan. In John F. Kantner (Ed.), *Population and social change in South East Asia.* Lexington, Massachusetts: Lexington Books, 1975.

35-SF-1 THE STANFORD HYPNOTIC CLINICAL SCALE FOR USE WITH CHILDREN

Investigator(s): Arlene H. Morgan, Ph.D.; Ernest R. Hilgard, Ph.D.; and Josephine R. Hilgard, Ph.D., M.D., Laboratory of Hypnosis Research, Department of Psychology, Stanford University, Stanford, California 94305.

Purpose: To standardize a short measurement scale to assess the general level of hypnotic susceptibility in prospective patients for hypnotherapy in the control of pain, primarily with children suffering from cancer or severe burns.

Subjects: 120 local community children, ages 5 to 16, participating in the standardization of The Stanford Hypnotic Clinical Scale (SHCS).

Methods: The subjects' scores will be compared with norms on a previously standardized scale, the Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A). Data will be collected in individual sessions with a child, in which the new scale (SHCS-C) and the SHSS:A will be administered. Statistical treatment will include correlation analysis between the two scales, and an internal biserial correlation analysis of items within the new scale.

Findings: A pilot study of 18 children showed correlation of .79.

Duration: Summer 1974-December 1975.

Cooperating group(s): National Institutes of Health, Public Health Service, U. S. Department of Health, Education, and Welfare.

35-SH-1 LEAD POISONING AND ITS PSYCHOLOGICAL EFFECTS

Investigator(s): Vita Krall, Ph.D., Chief Child Psychologist; and Irving Rozenfeld, M.D., Consulting Neurologist, Michael Reese Hospital, 29th and Ellis Streets, Chicago, Illinois 60616.

Purpose: To determine the effects of lead ingestion on various physical, neurological, and psychological aspects of children's functioning, including assessment of children's blood, nerves, and speech.

Subjects: Experimental group: 190 children, ages 3 to 12, with varying degrees of ingested lead. Control group: Siblings of experimental subjects who did not ingest lead.

Methods: Experimental group children with varying blood levels were studied for lead ingestion and compared to controls who did not ingest lead. Assessment instruments consisted of the Wechsler Intelligence Scale for Children, Wechsler Preschool and Primary Scale of Intelligence, and Progressive Matrices. The Beery-Butanika Visual Motor Test, Human Figure Drawings, and Rorschach Inkblot Test were also used.

Duration: January 1974-completed.

Cooperating group(s): International Lead Zinc Research Organization; Illinois Department of Public Health.

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ERIC Clearinghouse on Early Childhood Education, Publications Office, 805 West Pennsylvania Avenue, Urbana, Illinois 61801, publishes a quarterly newsletter; subscription, $2.00. Also available free, a List of Publications relating to children, ages 0 through 12.

Exceptional Child Education Abstracts (quarterly), The Council for Exceptional Children, Box 6034, Mid City Station, Washington, D. C. 20005.

Excerpta Medica Foundation, New York Academy of Medicine Building, 2 East 103rd Street, New York 10029, and 119-123 Herengracht, Amsterdam C, The Netherlands, has established an abstracting service on pediatrics, available on a yearly subscription basis. In addition to abstracts, the Foundation provides to subscribers, at cost, photocopies and translations of complete articles.

Health Economic Studies Information Exchange, Division of Medical Care Administration, Public Health Service, Washington, D. C. 20402.

Index Medicus, National Institutes of Health. Order from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

Language and Language Behavior Abstracts (quarterly), Center for Research on Language and Language Behavior, University of Michigan, Ann Arbor, Michigan 48104. Order from Subscription Manager, LLBA, Meredith Publishing Co., 440 Park Avenue South, New York, New York 10016.

National Bureau of Child Welfare Library (Voor Kinderbescherming), Stadhouderslaan 150, The Hague, The Netherlands, publishes abstracts of articles in the field of child welfare each month. The articles are in Dutch, but those familiar with the Universal Decimal System would be able to understand something about the articles. The subscription rate for documentation on cards is 30 guilders (approximately $8.40).

National Easter Seal Society for Crippled Children and Adults Library has initiated a photoduplication service for persons engaged in rehabilitation research. It is available without charge to personnel in education or research institutions and health or welfare agencies, public or private. This service may provide professional literature that is not available in local libraries. For information, write: Librarian, National Easter Seal Society, 2023 West Ogden Avenue, Chicago, Illinois 60612.

Nutrition Abstracts and Reviews, Commonwealth Bureau of Animal Nutrition, Bucksburn, Aberdeen AB2 9SB, Scotland.

Poverty and Human Resources Abstracts (bimonthly), Institute of Labor and Industrial Relations, University of Michigan-Wayne State University, P. O. Box 1567, Ann Arbor, Michigan 48106.

Psychological Abstracts, American Psychological Association, 1333 — 16th Street, N.W., Washington, D. C. 20036.

Rehabilitation Literature, National Easter Seal Society for Crippled Children and Adults, 2023 West Ogden Avenue, Chicago, Illinois 60612.

Research in Education (monthly), Computer Microfilm International Corporation, P. O. Box 190, Arlington, Virginia 22210.

Science Information Exchange, Smithsonian Institution, 209 Madison National Bank Building, 1730 M Street, N.W., Washington, D. C. 20036 provides to qualified investigators, for a fee, selected abstracts of current research supported by foundation or government grants. The exchange covers such fields as medicine, nursing, public health, nutrition, psychology, education, anthropology, mental health, and intercultural relations.

Sociological Abstracts, 15 East 31st Street, New York, New York 10016.

RESEARCH RELATING TO CHILDREN
ERIC/ECE 805 West Pennsylvania Avenue
Urbana, Illinois 61801

If you are currently engaged in research on children or their families, we would appreciate your cooperation in providing a short summary of your work for inclusion in the next issue of *Research Relating to Children.*

The ERIC Clearinghouse on Early Childhood Education has been funded by the Office of Child Development to collect and disseminate information on current research relating to children and their families. It is the purpose of the clearinghouse to make such information available to research investigators and others concerned with research in child life.

The instructions on the third page of this form will serve as a guide for your summary. You will, of course, receive a free copy of the issue in which your study appears.

If you know of other researchers whose work might be of interest to the Clearinghouse, please give name(s) and address(es) below:

_____

_____

_____

_____

Thank you for your cooperation.

INFORMATION SUPPLIED BY

Name _____

Position _____

Organization and address _____

_____

_____

_____

City _____ State _____

Zip Code _____ Phone ( ) _____

SUMMARY OF RESEARCH PROJECT

TITLE:

PURPOSE:

SUBJECTS (Sample): (Please include number, age range, sex, description of subjects.)

METHODS: (Please discuss research design: control groups, methods of data collection, research instruments, unique features of research, statistical treatment.)

FINDINGS TO DATE:

DATE PROJECT INITIATED:		ESTIMATED TERMINAL DATE:
PRINCIPAL INVESTIGATOR(S):	DEGREE:	POSITION AND ORGANIZATION:

COOPERATING GROUPS: (In the research itself or in the research funding.)

PUBLICATION REFERENCES: (If no publication is planned, please indicate under what conditions data and results will be available.)

INSTRUCTIONS

Please report studies in progress or completed within the last year that:

center on children or their families in such areas as child growth and development, intelligence, personality, education, social adjustment, family life, physical and emotional disorders

concern service programs in the fields of child health, child welfare, or special education

Please DO NOT report:

animal studies

studies already published in sources generally available in major libraries across the country

demonstration projects, unless there is a formal plan for evaluation

regularly collected material such as annual reports, work preparatory to writing handbooks; directories

research based on secondary sources

Originally established in 1912, the Children's Bureau has consistently been concerned with all matters pertaining to the welfare of children and child life. In 1948, the Clearinghouse for Research in Child Life was established within the Bureau specifically to collect and disseminate information about current research relating to children. In July 1970, the ERIC Clearinghouse on Early Childhood Education, part of the national Educational Resources Information Center network, assumed the production of *Research Relating to Children*, a publication of the Bureau's Clearinghouse for Research in Child Life. The aims of this publication are consistent with the information analysis goals of the ERIC system. *Research Relating to Children* will provide information on current research relating to children and their families to educators, researchers and others in the area of child life who find the need for such a service.

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Research Relating to Children
ERIC/ECE
805 West Pennsylvania Avenue
Urbana, Illinois 61801

The following investigators are doing research concerning children or services for children. Send report forms to obtain information.

Name _____

Address _____

_____ Zip Code _____

Name _____

Address _____

_____ Zip Code _____

Name _____

Address _____

_____ Zip Code _____

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